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The Financing of Elementary and Secondary Education in Canada

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The Financing of Elementary and Secondary Education in Canada

An Overview with Recommendations

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Acknowledgments

This paper was completed in July 1991, for the Economic Council of Canada as a background document for the Council's study of education which began early in 1990. More recent reports, including the comprehensive study of elementary and secondary education in New Brunswick, have served to underscore the issues raised in this paper. In a word, the major issues facing education are systemic and cannot be addressed simply as a matter of finance. Nevertheless, education finance policies and programs remain a potent factor in the overall direction of education.

In preparing this paper, I received critical assistance from the staff of the Economic Council of Canada, under the direction of Keith Newton. Their comments and challenges were most helpful in clarifying the complex issues of the funding of elementary and secondary education in Canada.

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As is always the case, responsibility for the conclusions and recommendations must remain my own.

Foreword

Canada's learning system is under scrutiny. Our ability to develop the skills that will equip us to prosper in the information age is being questioned. Accordingly, the Economic Council of Canada has undertaken a major study of education and training that takes a hard look at various aspects of the performance of the system.

While pressures for improvements in education are mounting, fiscal constraints are severe. Thus the present working paper by Tim Sale, on the funding of elementary and secondary education in Canada, is particularly relevant at this time. A companion paper, by the same author, similarly examines funding structures and formulae in various jurisdictions at the postsecondary level.

These studies are an integral part of a program of research which has culminated in the publication of a Council Statement entitled *A Lot to Learn* and a detailed analytical Research Report on education and training in Canada.

Judith Maxwell
Chairman

The Financing of Elementary and Secondary Education in Canada

Introduction

In 1989-90, some 5 million students, or 17 per cent of Canadians, attended elementary and secondary school systems which employed over 280,000 teachers and approximately 70,000 support staff, and which spent some $27.6 billion, or about 5 per cent of Canada's GDP. Constitutionally, provinces are responsible for formulating policy and giving substance to all education systems in Canada, with the exception of education programs for Treaty Indian people, although the manner in which this power is exercised varies significantly across the nation. A more holistic approach might view the system as the continuously shifting outcome of the interplay of forces representing provincial and local fiscal and political priorities, professional interests, parental concerns, and interest group lobbies.

The dynamics of public and private, elementary, and secondary education across Canada might be likened to the game of cat's cradle. Loops of string are drawn into complex patterns in a child's hand, shifting and creating patterns, pulling various fingers tighter or looser. Nevertheless, each string is about the same length, and each hand has but five fingers. The variations are fascinating, but the game is the same. Politicians, civil servants, professional educators, parents, and interest groups weave the patterns of education, constrained always by the length of the string . . . the fiscal and human resources of the system.

Yet a child's education, unlike a game of cat's cradle, is a far from trivial matter. Individually, a child's lifelong economic and personal circumstances are closely related to her or his level of achievement in school. In aggregate, educational outcomes profoundly condition the social and economic well-being of all Canadians, present and future.

The purposes of this paper are:

- to examine the present patterns of education finance in Canada;

- to review what we know from research about the impact of education expenditures on education outcomes for students;

- to examine the various options for reform of the funding of education that have been presented in recent years; and

- to propose some alternatives concerning funding and administrative direction of Canada's elementary and secondary education systems.

Criteria for Assessing Education Finance Systems

Traditionally, education finance systems are assessed in regard to three concerns:

- *Adequacy*: Does the system provide sufficient resources for an agreed upon standard of services?

- *Equity*: Does the system distribute the available resources fairly across the system, and within the system, to those with special needs? Are the funds to pay for the system raised in a fair manner to taxpayers?

- *Efficiency*: Does the system use the resources it has in a manner which is generally thought to be efficient, within the known methodologies of instruction? Is the system structured in ways that allow for effective use of scale, distribution of pupils, resources, etc.?

Some commentators use a fourth criteria, that of *liberty*. Does the system in question result in individuals gaining a high level of freedom to make decisions regarding their personal and economic future?

However, all of the above concepts are somewhat relative to the cultural, economic, geographic, and social context within which they are experienced. Equity has different meanings when the culture in question values community actions and decisions more highly than purely individual actions. Efficient allocation of scarce resources may well have clarity in some economic systems; in education it is a highly debatable proposition, depending upon the learning theories to which one subscribes. Therefore, before approaching the matter of education finance, one should first address the question of the intended goals of the system, which presumably are to be supported by any given funding approach. As we will see in later sections, there is little clarity regarding these goals, and hence little apparent relationship between the present funding mechanisms and the education outcomes which might be sought. Indeed, clear outcome measures of any sort are conspicuous by their absence in most North American education systems.

An Evolving System

In earlier times, the matter of education most frequently was addressed at the local level, when parents and sometimes religious leaders sought to provide education in secular and religious matters for young children. "Public" schools were locally organized to provide basic literacy and citizenship skills. Subjects such as reading, penmanship, arithmetic, and history were taught in an atmosphere that rewarded compliance, punctuality, and order. Religious

schools were developed both to ensure literacy and to provide a mechanism for continuing religious instruction and indoctrination of the young.

As the newly emerging nation began to require more skilled personnel, a movement began to extend the "public" school to include "high" school. Led by such great names in Canadian education as Egerton Ryerson, this movement was opposed by many as costly and wasteful, but was eventually successful. As secondary schools developed, it became more important that provincial departments of education expand to ensure that the curricula and teaching standards used in high schools be consistent. In turn, this gave rise to the system of "inspectors," provincial curricula, and "matriculation" examinations. Nevertheless, the actual day-to-day business of education remained very much a local matter until well after World War II. School districts outside of cities often were comprised of single schools with one or more classrooms.

At the same time, many of the country's elite continued to use private schools for their children's education. For example, the Upper Canada College was founded in 1829 to provide education to the level of university entrance and continues to the present day as the oldest of Canada's independent schools. The Maritime provinces, Newfoundland, and Ontario provide no support to independent schools; the Western provinces and Quebec provide varying levels of support, reaching as high as 55 per cent of total private-school operating costs in Quebec. Manitoba has recently announced its intention to move gradually to providing qualifying private schools with 80 per cent of the average per-pupil funding of public schools, which effectively is the level now provided by Quebec. Enrollment in independent schools is about 5 per cent of the total national enrollment, and has continued to grow slowly in most provinces, but has recently reached 10 per cent of total enrollment in Quebec.

Denominational schools, usually Roman Catholic, developed in all provinces, but were funded in a variety of ways. Newfoundland has a confessional school system comprised of Roman Catholic, Integrated (Anglican, United Church, Salvation Army), Pentecostal Assembly boards, and one Seventh Day Adventist board. Quebec has a Roman Catholic and Protestant confessional system, each governed by boards elected by those who indicate their support for that educational system. For the most part, the Catholic boards represent the majority, while the Protestant boards represent the minority, which is the reverse of the situation in Ontario, Alberta, and Saskatchewan. The technical term for such minority boards is "dissentient," meaning "disagreeing with the majority opinion." In these four provinces, such boards enjoy constitutional protection. Quebec also provides generous support to independent schools, many of which are associated with religious bodies. Ontario has a separate, fully funded Roman Catholic school system, governed by elected

boards. Until the 1960s, when grants to independent schools began, Manitoba provided funding only to its nondenominational public-school system. Saskatchewan and Alberta have separate Roman Catholic school systems and also provide support to qualifying independent schools. British Columbia has no Roman Catholic school system, but does provide grants to eligible independent schools, including denominationally related schools.

The Development of Provincial Education Finance Systems

Following World War II and the 1950s baby boom, the financial resources required to support the greatly expanded enrollment severely strained the local residential tax base which then was the major source of education funding. An acute shortage of teachers contributed to a rapid upward spiral of teachers' salaries, adding to the cost pressures facing the system. Hence the organization of public schools became more a matter of provincial concern. Between 1960 and 1975, all provinces went through a process of consolidation of local school districts to form regional boards. In some cases, the boards began as elementary systems, but soon encompassed high schools as well. For example, in 1971, Quebec consolidated 1,100 municipalities and their local school boards into 63 regional boards of education. Manitoba underwent much the same process in 1965-67.

Provinces moved to develop education finance systems which were patterned on the American experience. In such systems, the state ensures that a minimum level of support for education is available throughout its jurisdiction. Varying formulae, each with particular qualities, were developed. However, in Canada, these formulae evolved to provide a much higher average proportion of provincial support than is typically the case in the United States. Provincial leadership also played a greater role in developing Canada's public education systems than was the case in the United States.

Education finance systems are frequently based upon the pursuit of three related forms of equity. *Horizontal* equity seeks to treat like students alike; a student in London, Ontario, should have access to reasonably similar education resources as an identical student in Moosonee. *Vertical* equity seeks to ensure that unlike students are treated according to their specific needs. For example, it would be *unfair* to give a handicapped student access to the same education resources as a nonhandicapped child. It may also be unfair (as well as educationally unsound) to provide identical resources to children from poor, inner-city communities as to children of affluent suburban areas.

Taxpayer equity seeks to ensure that the burden of providing resources to the system is borne as fairly as possible. This is particularly an issue when an unevenly distributed tax base, such as the real property tax base, is used as a

major source of funding. It may also be an issue if the taxes in question are perceived as being regressive, as many critics claim is the case with the property tax.

During the period of school consolidation and rapid increases in enrollment, provincial departments of education became much more active than they had been for many years. In some quarters, education was seen as the answer to all manner of ills, from poverty or rural isolation to handicap and prejudice. Teachers and schools were called upon to provide an ever-widening array of services to make possible the attainment of these new goals. Departments of education promoted new curricula, new teaching approaches, and new programs, particularly in the area of services for children with special needs. The development of second language education, including but certainly not limited to French Immersion programs, changed the nature of public-school education in many regions of Canada. Computer science, second and third languages, options such as economics and sociology and outdoor education can now be found in most urban and some rural high schools.

As the demands placed upon the curriculum became more intense, urban high schools more and more came to resemble university campuses, where students pursued a wide range of options. However, the length of the school day remained fixed, or even shortened somewhat. Hence the time spent on core subjects diminished as newer subjects found their place.

Recently, there appears to be a reassertion of the more traditional expectations and roles of schools on the part of parents and the general public. A Royal Commission in British Columbia and a number of reports in other provinces have tentatively identified the need to focus once again on teaching defined skills in a core of subjects, as well as the newer skills of critical thinking and decision making. Calls for system-wide high-school examinations are frequently heard, as popular and academic studies reveal that as many as 25 per cent of Canadians remain functionally illiterate, according to some definitions.

Throughout this evolutionary process, the *funding* of education remained largely divorced from the *goals* of education. Apart from a few categorical grants, service levels or curriculum content were at best loosely connected to funding provisions. For example, no explicit connection can be discerned between the ever-expanding choice of courses in high school and the funding system.

At the same time as the traditional system was facing new questions of its effectiveness and accountability, education services for Canada's aboriginal peoples were increasingly under scrutiny. Indian and Northern Affairs Canada expends over $735 million on all levels of education for

treaty-status aboriginal people. For over 20 years, Canadian Indian and Inuit people have been calling for the return of control of their education systems to local bands, communities, and tribal councils. They view education as a vital tool for cultural survival, as well as a door to economic development. In both territories and some provinces, particularly in the Prairie region, the fastest growing component of the work force is composed of aboriginal young people, while overall levels of unemployment in this community frequently reach 80 per cent. How these systems are to be funded and transferred to local control is a vital policy question facing the federal and territorial governments.

Summary

In this section, some of the vital issues facing education and education finance in Canada today have been outlined. In the remainder of the paper, we will examine some of these issues in greater detail and consider the nature of the policy dilemmas which face Canadians as they debate the future purpose and funding of our elementary and secondary education systems.

In the next section, we will examine various alternative education finance schemes from a conceptual perspective, indicating some of their strengths and weaknesses, and will briefly examine the tax bases which are typically used to fund education. The third section will review the present Canadian provincial and territorial systems, including some examination of developments in aboriginal peoples' education systems. In the fourth section, the unique experience of British Columbia, where a modified resource cost-funding framework has been in place for a number of years, will be reviewed. The paper will conclude with an examination of how education funding systems might be used to provide incentives to excellence in the face of continuing fiscal constraint.

Conceptual Models and Alternatives

While the policies and programs for financing public education in North America's 10 provinces and 50 states may appear to be remarkably similar in a broad sense, there are significant differences among education funding and administrative systems, particularly in Canada's provinces and territories. Two provinces, New Brunswick and Prince Edward Island, and four American states provide 100 per cent provincial or state funding. In most of the remainder, funding programs are essentially elaborations of what are usually termed "foundation" plans, first developed in the early part of this century by George Strayer, Robert Haig, and others. The term "foundation" refers to a commitment by the state or province to ensure a minimum funding base for local

education programs. Varying formulae, each with particular qualities, were developed. Figure 1 shows an example of such a system. Readers wishing more technical detail on the nature of the various examples of education funding systems should consult the bibliography at the conclusion of this report.

From its origins, public education has had a significant degree of dependence upon local funding sources. This dependence, typically in the region of 50 per cent, has remained throughout the evolution of foundation programs, most frequently through the use of the property tax base against which boards levy taxes. Provincial or state funding is provided from a mix of general revenue and specific tax levies, sometimes also including property levies additional to those levied locally. Funding support is then delivered to school boards through formulae which usually have three main components.

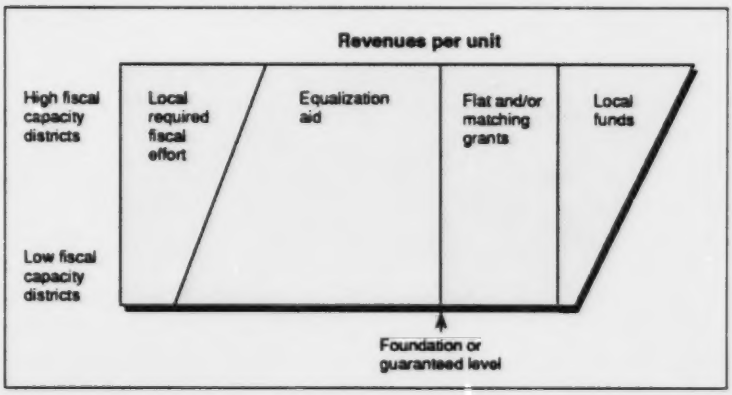
- The *basic level of grant* is called the "block" or "foundation" grant, which is typically a flat amount per pupil, or is related to a teacher grant per "x" pupils. In some cases, it may vary slightly within a defined range.

- *Specific needs* are supported through "categorical" grants for services such as transportation, special needs, and language programs.

- *Equity in regard to tax capacity* is supported through some form of "equalization" grant. Such grants should not be confused with constitutionally

Figure 1

A system of public school finance: a common example



Note The above example is not intended to be representative of any specific province.
Source Adapted from American Education Finance Association [1988, 3].

mandated federal equalization payments to provinces. In the case of public-education systems, equalization grants are paid by provinces to local school divisions to enhance their revenue capacity. Sometimes such grants are based upon equalization of balanced assessment per pupil, so that all school districts will have the same income per pupil from the same tax effort. Alternatively, only a portion of the tax effort is equalized, and, in some other cases, the equalization is less than 100 per cent. Some plans call for a minimum local tax effort to qualify for provincial or state support.

Grant Calculations

Grants usually are calculated according to enrollment levels. Because most jurisdictions recognize that in any given area, population density and other factors affect the cost of education, raw pupil counts are often "weighted." Some areas give different weights to different grade levels. For example, during the 1970s, Manitoba allowed a lower pupil-educator ratio at the secondary level than at the elementary level. Enrollment may be weighted to adjust for the qualifications and experience of the teaching staff. Factors relating to other criteria, such as population density or the presence of students with handicapping conditions, may be developed and used to multiply the actual enrollment to arrive at a *weighted enrollment* for grant calculation purposes. In effect, weighting provides "phantom" pupils in the system, rather than increasing per-pupil actual funding.

Capital Expenditures

Capital expenditures are frequently shared between the local and provincial or state levels. A minority of areas, for example, the Territories and Manitoba, provide 100 per cent of approved school construction and renovation costs. In some cases, the required local capital contribution may be significant; and in most American states, local referenda are required for capital spending approval.

Resource Cost Models

Apart from 100 per cent provincial or state funding, there is one significant exception to foundation plans, termed the *Resource Cost Model* (RCM), which was developed in Illinois during the 1970s. It is based upon the notion that the state ought to specify and then fund a *set level of education program*, and that any "extras" should be provided entirely by the local tax base. The RCM approach shifts attention from a preoccupation with funding formulae to a focus on programs and levels of service which ought to be available to

all students. The Resource Cost Model requires the definition of service levels and the development of accurate costing of these levels of service in each school district of the state or province. Funding is then provided in respect of that level of service. In this model, there is no set foundation level; each division or district has a unique level based upon actual local costs of delivering the agreed-upon standard of service. Such a plan might also be termed a *Variable Block Grant Program.* The Resource Cost Model is in contrast with foundation plans which, though they may contain fiscal limits or ceilings or caps, do not spell out these limits in programmatic terms. The Resource Cost Model is in limited use in British Columbia. This model will be explored in more detail in the fourth section of this paper.

Current Issues in Education Finance

There are two aspects to the funding of any public service; the *source* of funding and the *application* of that funding to provide service. Both sides of this equation are experiencing major pressures and problems in current education finance programs across North America. Additionally, there is a level of overall criticism of the perceived rigidity and mediocrity of the public education system in some regions. This has prompted some calls for serious examination of means of expanding parental and student choice, sometimes through the use of voucher systems. What is the nature of the debate in each of these issues?

Funding Source Problems

In earlier days, education funds came largely from a mixture of fees, poll (or per-person) taxes, and property taxes. In some areas, there are still minor amounts of fees collected, usually for special programs. Today in Canada, the poll tax remains only in Newfoundland. All other areas, with the exception of those in which the state provides 100 per cent of the funding, depend in varying degrees on locally levied property tax to fund public education. In New Brunswick and Prince Edward Island, a provincial property levy is collected as part of provincial general revenue. Other provinces either directly impose a provincial property levy, as in Manitoba, or do so through required minimum local tax effort, as is the case in Ontario. Canadian direct reliance for education finance on the property tax base, net of property tax credits, is lower than in the United States and ranges widely, from 0 per cent in New Brunswick and Prince Edward Island to 45 per cent in Ontario. The interprovincial arithmetic average is under 20 per cent.

The property base which is used for education taxation is defined differently by each jurisdiction. For example, some areas, such as British Columbia,

restrict the school tax levy to the residential tax base, while others, such as Ontario and Manitoba, allow access to the commercial base as well. Some provinces or states also levy a uniform property tax for either education (as in Manitoba and Quebec) or for general revenue purposes (as in New Brunswick and Prince Edward Island) on all or part of this tax base.

Taxation experts have long held that the property tax is regressive, impacting proportionally more heavily on the poor than on the rich. Provincial responses to mitigate the effects of property taxation vary widely. British Columbia, Manitoba, and Ontario provide a range of targeted and untargeted tax credits, while Quebec provides a relatively small program to low-income families and farmers to relieve property taxes. British Columbia imposes a minimum property tax of $200, reducing this rate to $100 for senior citizens. The Prairie provinces provide specific relief from school taxes on farm property, either by exemption (Manitoba and Saskatchewan) or reduced assessment (Alberta). New Brunswick provides an exemption of up to $8,000 of assessed value for low-income single persons, while Newfoundland exempts senior citizens, low-income earners and social assistance recipients. Nova Scotia and Prince Edward Island provide no property tax credits.

Two major problems arise in regard to the use of the property tax base for the funding of education. First, if a province or state-wide property levy is to be fair, then property assessments must be comparable and done using consistent techniques throughout the jurisdiction. In the case of many states and provinces, such assessment approaches are either absent or just beginning to take effect.

Second, the distribution, and hence the capacity of the property tax base to generate funding for education, is extremely varied. For example, the very wealthy property base of the Metropolitan Toronto Board of Education means that area receives almost no funding from the province, while some Northern Ontario areas require almost 100 per cent provincial funding. This variation is most marked in the "farm" and "other" (largely commercial) portions of the tax base. Both sectors are distributed unevenly throughout most jurisdictions. In Manitoba for example, over 70 per cent of the commercial base is located within its capital city, Winnipeg, while the farm base is strongest in the southern and western regions of the province. Because both farming and the industrial/commercial sectors usually relate to and benefit from the provincial economy as a whole, it is hard to argue that it is equitable for education systems, which are in industrially or agriculturally rich areas, to benefit specifically from the added wealth of their local tax base.

Hence some provinces either have removed or presently are considering removing the commercial tax base from the local education levy, and then taxing the commercial base only at the provincial level. Alberta is discussing

the removal of local school board access to the commercial property tax base, and British Columbia and Quebec have already done so. The 1988 report of the Royal Commission on Education in British Columbia found that the removal of the commercial tax base from local taxation was a progressive step, and recommended that this practice be continued.

Last, the property tax base is only a rough indicator of the ability of residents or businesses to pay taxes. While its supporters point out that it represents significant wealth, that wealth is not a guarantee of ability to pay taxes. Grain farmland is valuable, but if grain prices are low, as they have been in Canada for several years, the farmer may have no cash flow with which to pay taxes.

Thus one of the enduring questions facing education finance is the appropriate *balance* between local and provincial funding and the proportion of funding which should be drawn from the local property tax base. From the perspective of an individual student, it can be argued that the future social benefits which are attached to education ought not to be compromised by the poverty of a specific region in which he or she may reside. This is the chief rationale underlying provincial aid to education or even 100 per cent provincial financing of education. Hence some education finance authorities suggest that education should be largely funded from the general revenues of the state or province. Arguing that a sound education system benefits the entire society, they would end or at least severely restrict the use of the property tax as a source of education revenues.

Others suggest that to maintain school division autonomy, local taxpayers ought to contribute some minimum amount to fund their education system, likely through a minimum property tax, so that local residents have a stake in its effectiveness and efficiency. While supporting property tax credits in principle, they would hold that such credits ought not to remove school and municipal taxes entirely. This is an issue in jurisdictions with generous property tax credits, such as Manitoba, where property tax credits result in some homeowners in rural areas paying no net property tax.

Grant Component Problems

On the "application" or granting side of the ledger, there are three major issues in current formulae. The first, and most pervasive, results from the imbalance between funding sources and the program demands with which the system is faced.

Demands for new education services most frequently arise at the local level, which typically provides a minority of the funding. This is true even where

the senior level of government may initiate a policy which implies the need for increased education funding. For example, while language policy in Canada has favoured the expansion of French Immersion programs, it is parent demand at the local level which has actually resulted in the implementation of such programs.

The senior level of government, which is less subject to such local funding pressure, frequently allocates a lower rate of increase than the new demands require. But because the local contribution (levy) is usually the residual amount remaining to be raised after all other income is taken into account, it is extremely sensitive to even small increases in program levels or costs. This produces what can be called the *marginal increase effect*. In general terms, wherever a local levy provides a small portion of the total spending, it is extremely sensitive to differences between local requirements and provincial support.

In the following box, we see a jurisdiction in which the province provides, on average, $800 of each $1,000 of the operating costs for education. If overall expenditures rise by 5 per cent, while provincial grants covering 80 per cent of the budget rise by 4 per cent, then the local levy will have to provide a 5-per-cent increase for its 20-per-cent share, plus 1 per cent for the remaining 80 per cent. *This will require a 9-per-cent increase in the local levy.* Thus small shortfalls in provincial support can result in very large increases in the special levy.

Example of marginal increase effect

	Expenditures	Province	Local levy
		(Dollars)	
Year 1	1,000	800	200
Year 2	1,050	832	218
Increase	(5%) 50	(4%) 32	(9%) 18

Categorical Grants

The second general source of tension in foundation plans relates to the role of categorical grants. Typically, such grants are intended to cover or largely offset the additional costs of specific services to specific groups. Grants are provided for such programs as special education, transportation, and heritage or second languages.

However, the demand for these new services frequently grows at a faster rate than increases in overall provincial or state funding. Unless the categorical grants are adjusted accordingly, and usually at higher levels than the basic funding, each year they will cover a lower portion of the program costs. This shortfall becomes part of the marginal increase pressure on the local levy described above.

A second problem with categorical grants is that typically, they are provided to programs whose costs vary widely across divisions. For example, transportation grants which are based on a fixed per-student contribution may cover significantly different proportions of the actual costs of transportation in various areas. Unless the categorical grant covers close to 100 per cent of the actual costs of this service, divisions are forced to allocate funds to cover the shortfall. These funds come from the division's remaining revenue, sometimes requiring a lower level of expenditures on instruction in order to pay a shortfall in a categorical grant.

Equalization Grants

Equalization grants become problematic in areas which do not impose overall expenditure ceilings. Without stated expenditure ceilings, the amounts subject to equalization are not under the control of the province or state. The only control on these expenditure levels is the resistance of local taxpayers to further taxation of the local property tax base. In such cases, the equalization grant takes on some of the characteristics of a matching grant, except that the matching level may not be 50 per cent, but rather the per cent supported by the equalization formula.

In such cases, the funding system may be said to be expenditure-driven. Areas willing to spend more on their programs can get more support. If they do not have the tax capacity to do so, they cannot get this support. This can have the reverse effect to that desired from equalization programs. Richer areas may be able and willing to tolerate higher taxes, thereby gaining higher equalization grants. Poorer areas, or those whose economies are in a cyclical downturn, will not be able to afford the local spending needed to secure higher equalization grants.

Cost Control in Education Finance

Funding Formula Problems

All formula-driven funding systems share a common problem, rooted in the intrinsic nature of such systems. Formulae usually respond to a percentage of some stated cost base or service level. No formula can control the *cost* of

providing a given level of service. When the costs of maintaining the services rise above the level which the province feels it can support, the formula is usually amended to conform to the province's expenditure capacity. Over time, the formula then loses its capacity to meet established service needs and its original relationship to these service levels.

As we saw above, the underlying demand for services arises largely at the local level, while the majority of funding support comes from the provincial level. Typically, provincial funding does not "keep up" with local spending increases. In this situation, a cost-control equilibrium is only reached when local demand is moderated by high local taxation levels. Citizen resistance to higher taxes finally balances the demands for more services. Local expenditure increases then fall into line with provincial grant increases. Hence expenditure control is extremely difficult when education finance programs combining local and provincial funding sources are in place.

If the province responds to relieve this perceived excessive local tax pressure, either through direct mill rate reductions, or indirectly through property tax credits, the likelihood is that the resulting tax room will be used up over a period of years by local authorities. When this happens, the pressure for the province to relieve high property taxes increases, and the cycle begins again.

By definition, so long as there are two levels of taxing authority, and the majority of demand is felt where the minority of funding power exists, this cost-control dilemma will continue. There would appear to be only two possible solutions to this problem.

The first, and simplest, is full provincial funding of public education, as in New Brunswick, Prince Edward Island, and four American states. For all intents and purposes, Quebec, Nova Scotia, and most recently British Columbia also fall into this category, although technically, local boards can levy property taxes to raise funding in addition to that provided by those provinces. In these cases, funding and service levels are entirely determined by the province. The major problem with this approach is the perceived loss of local autonomy of the boards.

The second, and only partial solution, is to raise provincial support to such a high level that the role of local property taxation is minimal. In this situation, local limits to property tax increases are quickly reached, and demand is moderated accordingly. Within Canada, Newfoundland, Quebec, and Nova Scotia have taken this approach.

Cost-Related Problems

Variable costs in education are largely related to salary levels and to the costs of capital equipment and other supplies. The costs of capital are very

similar to those pertaining to any public-sector capital expenditures. Energy costs form a small portion of most school budgets, typically comprising under 3 per cent of expenditures.

Salary-related cost pressures arise from a combination of four factors:

- numbers of students;
- the ratio of pupils to educators (PER);
- the salary levels of teachers; and
- the placement on and nature of the salary grid (experience of staff and numbers of increments).

National projections indicate that the Canadian school-age population will be very stable for the next decade, with significant regional variations, in which severe declines in local population may occur. For example, some school divisions in urban areas have experienced a 50-per-cent decline in enrolment over the past 15 years. The baby-boom echo is so faint in most regions of the country as to be barely discernable. Certainly, it is not sufficient to cause any problems of crowding or increased demand. Ontario, British Columbia, and Alberta are experiencing growth largely related to immigration; the Northwest Territories continue to have a very high natural rate of increase and will experience additional pressure as their secondary school age population increasingly remains in or returns to school. The difficulty posed by this picture from a cost-control perspective is that it requires firm management to reduce personnel costs in areas of declining enrollment. However, if this is not done, unit costs per student may not remain in line with student population.

The pupil-educator ratio (PER) is a measure of the total number of full-time equivalent pupils to the total number of instructional personnel, including principals and supervisory staff, and not a measure of classroom size. This term is now used by Statistics Canada to replace the former "pupil-teacher ratio" (PTR). The PTR was sometimes confusing because it was unclear whether the PTR ratio related to actual classroom size, or some other measure. The PER is *not* a classroom size, but rather the ratio of full-time pupils to *all* certified educators in a jurisdiction.

During the decade 1978-87, pupil-educator ratios continued a long pattern of steady decline in all provinces except Quebec, where the PER rose 1.06 per cent. However, even with this rise, Quebec retained the lowest PER in Canada. In most provinces, the decline was steady, but in British Columbia and Alberta, there appears to be a reversal in the trend since 1985. With the onset of severe recessionary conditions in many regions of Canada, this recent pattern in Alberta and British Columbia may spread to other regions.

Most provinces directly or indirectly control the pupil-educator ratio through their funding systems. Hence the decline would seem to be a result of policy, rather than uncontrolled increases. Policies affecting PER include the introduction of language programs, inclusion of students with special needs, provision of services such as librarians and guidance teachers, and increased numbers of course offerings at the secondary-school level. Some of the decrease in PER is the result of declining enrollment, rather than the addition of new staff.

Between 1960 and 1982, teachers' salaries grew in real terms at 4.3 per cent per year. More recently, these growth rates have moderated considerably. Costs related to the salary grid will continue to be an important component of increases during this decade. Stephen Easton [1988] notes that with the current salary structure and contract provisions, increment-related costs will continue to grow for the next 20 years.

In spite of stable enrollment, cost control in education will be a difficult task, compounded in some provinces by the nature of their funding systems. Built-in patterns of staffing and class size, coupled with the continuing demand for new services, will provide stiff challenges to those who would restrain the overall expenditures of this large system.

Summary

This section has briefly reviewed the pattern of education finance in North America and outlined the major problems which occur in most foundation programs. We will now review the education finance programs presently in effect in Canada.

Education Finance – Present Canadian Practice

This section will briefly examine the overall costs of public education in Canada and some of the salient features of each provincial education finance system, noting similarities as well as differences among the provinces. The data cited are for the 1989-90 school year, unless otherwise noted.

While what goes on in the classroom may be quite similar across Canada, the various provincial and territorial education finance and administration systems now in place contain significant structural differences. In both Territories, all teachers are civil servants, while in all other provinces, teachers are employees of the local boards of education. In Manitoba, Ontario, British Columbia, and Alberta, all bargaining is at the local level, while in Nova Scotia, Saskatchewan, Newfoundland, New Brunswick, Prince Edward Island,

and Quebec, salaries are bargained provincially. In some provinces such as Saskatchewan and Nova Scotia, there is some local bargaining of non-salary items. Sources of education funding vary widely, from Ontario's and Manitoba's heavy dependence upon property taxation to New Brunswick's and Prince Edward Island's non-use of such taxes. Nova Scotia allows school boards to request municipalities to levy additional local taxes. Not surprisingly, little revenue comes from this source. From 1990 onwards, British Columbia will require that any school division which wishes to spend more than the provincially determined level must apply by referendum to its taxpayers for permission to do so, as Quebec, New Brunswick, and Prince Edward Island have done for some years.

There are also many similarities among the various systems. All provide special grants for some services such as transportation and special needs, as well as to remote areas. Where there is local funding through property or other taxes, all jurisdictions attempt to overcome the disparities in local revenue capacity by providing one or the other form of equalization grant. All except the Yukon provide for elected school boards to deliver education services. In short, all provinces have reviewed the universal structural issues of education finance, but have chosen to address them in a variety of ways, frequently conditioned by the history of education services in each province.

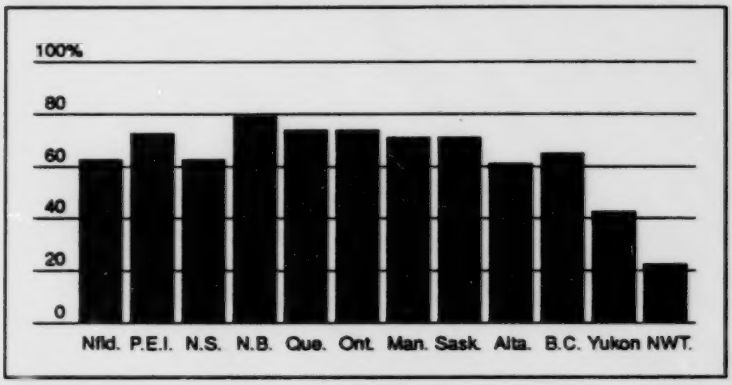
Students, Teachers, and Costs

Enrollment in public schools as a proportion of age cohorts has been quite stable for many years, with only slight growth in the proportion of 16- to 20-year-old enrolled in the elementary-secondary system. This is also reflected in the slow growth of graduates as a proportion of the 17- and 18-year old population until 1986, when the proportion actually began to decline, for reasons which are unclear. In overall terms, about 75 per cent of Canadian students complete high school by the time they are 18 (17 in Quebec). However, there are major interprovincial/territorial differences within this pattern. (See Chart 1.) Obviously, some provinces retain a significantly higher proportion of students to graduation than do others. However, because there are no interprovincial standards, it is not possible to infer the quality of education at graduation. The very low retention rate of the Northwest Territories and to a lesser extent, of the Yukon, should be of great concern.

Expenditures in Canadian public-school education systems began to grow rapidly from about 1950 onwards, when the first wave of baby boomers arrived at Kindergarten and Grade one. Easton [1988] provides some interesting data which underline the very large increases in the real costs of education in recent decades. In real dollars, spending levels per pupil grew from $900 in 1950 to over $3,200 in 1989 (in 1981 constant $). The biggest determinant of

Chart 1

Proportion of secondary school graduates to population[1] age 17 or 18, by province or territory, 1988



1 Quebec Grade 17, others 18.
Source Based on data from Statistics Canada.

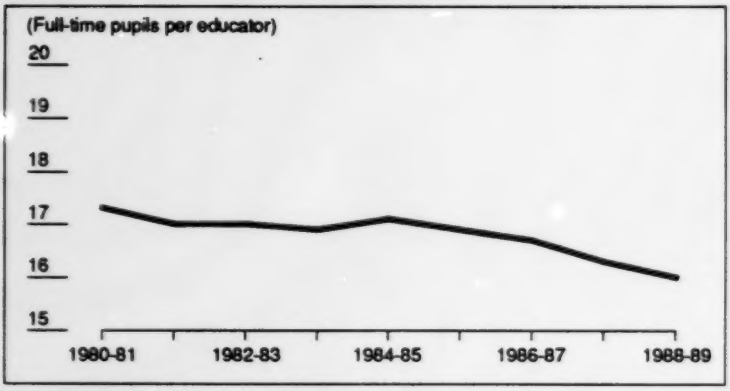
per-pupil costs are wage levels and pupil-educator ratios (PER). During the period 1960-61 to 1982-83, real wages grew by an average of 4.3 per cent annually, while the PER dropped from 26.1:1 to 18.4:1. The PER has since continued to fall slowly, reaching 16/1 in 1989-90 (see Chart 2).

The magnitude of even this very small decrease in the PER is staggering. At current average salary and benefit costs of $47,900 per full-time educator, the reduction in PER of 1.3 students represents a salary cost alone of $1,001,706,000. As will be noted later in this paper, there are virtually no data which substantiate the benefits of this reduction in PER.

Other operating costs also escalated significantly, growing by an annual average of 6.6 per cent. Increases in teachers' salaries are especially dramatic when compared to those in the United States. In 1950, Canadian teachers were paid about 59 per cent of their American counterparts; by 1983, they had surpassed American salary levels and were earning 131 per cent of their southern colleagues' average salaries. Clearly, Canadians have made a collective decision to invest proportionally more of their public-sector resources in education over the past 40 years. In the light of the severe American problems of teacher retention, student drop-outs, and overall academic achievement noted in many studies, this decision may well have been a wise one. The social climate of Canadian schools would seem to be better than that of some

Chart 2

Ratio of FTE enrollment to educators, 1980-81 to 1988-89



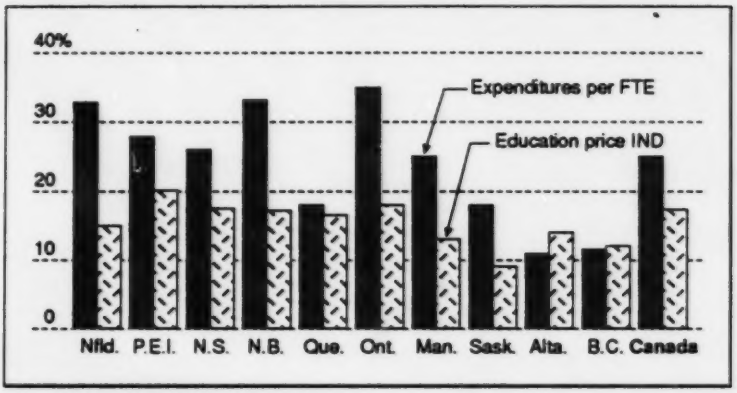
Source: Based on data from Statistics Canada.

American schools, and teacher retention is certainly much better. A review of international testing literature suggests that Canadian students have test outcomes which place them in the middle ranks of nations, with their American counterparts ranking nearer to the bottom of such results. However, caution should be used in placing too much emphasis on such international comparisons. Education finance and outcome literature has indicated for some time that there is only a very weak connection between teacher education levels and student outcomes, and that for regular students, once PER levels reach the low 20s, little is gained by dropping them further, unless such reductions are accompanied by major changes in teaching strategies.

In general terms, there has been some divergence in provincial expenditure patterns during the recent period from 1984-85 to 1988-89. In all provinces except British Columbia, per-pupil expenditures have risen in excess of the education price index (EPI). The Canadian average increase was 24 per cent, in comparison with the EPI's rise of 16 per cent. Above average increases were recorded in Newfoundland, New Brunswick, and Ontario. In Ontario's case, this growth raised per-pupil expenditures to the same level as those of Quebec, the highest among the provinces. Alberta, Saskatchewan and Quebec experienced much smaller increases in expenditures levels vis-à-vis EPI (see Chart 3). In British Columbia, spending increases actually fell very slightly below EPI growth. However, in 1989-90, British Columbia provided a very significant increase in public-school funding, which again resulted in expenditure growth above that of the EPI.

Chart 3

Per cent increase of public school expenditures per FTE student and the EPI, 1984-85 to 1988-89



Note: Excluding Adult Education expenditures.
Source: Based on data from Statistics Canada.

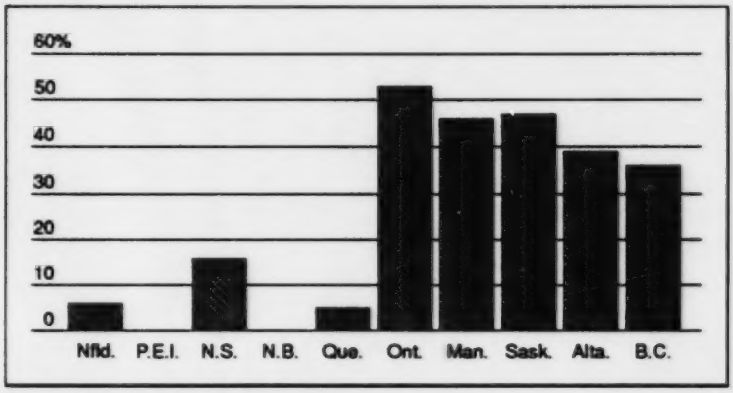
Expenditures per pupil vary significantly among provinces, with most of the variance explained by differences in teacher salary levels and pupil-educator ratios. In the case of the Territories, per-pupil expenditures are much higher than the Canadian average, largely because of two factors: fourfold higher capital expenditures and substantially higher teacher salaries and benefits. Somewhat surprisingly in light of the sparsity and remoteness of communities, the Territories do not have a significantly lower PER than the Canadian average.

Dependence on local property taxation as a source of revenue varies extremely widely across the country, ranging from 0 per cent in New Brunswick and Prince Edward Island to a high of approximately 53 per cent in Ontario. In some provinces, property tax credits significantly affect tax incidence, depending on the purposes for which they are granted. Chart 4 does not take credits into account.

In all provinces except Saskatchewan, school buildings are entirely funded by the provincial or territorial authority, up to approved levels. However, in many areas, approved levels are viewed as minimum levels, and local authorities frequently augment capital projects with local funds. Saskatchewan requires that about 10 per cent of the approved project cost come from local property taxes.

Chart 4

Education finance dependence on property taxation revenue, 1988-89



Source: Based on data from Statistics Canada.

We will now examine some specific characteristics of provincial education systems, noting in particular the areas in which they differ from national patterns. Information in this section of the paper is taken from a variety of sources, including responses in 1990 from provincial departments of education to inquiries, data from The Council of Ministers of Education, Statistics Canada, and from the 1988 research of the American Education Finance Association, *Public School Finance Programs of the United States 1986-87*.

Newfoundland

The extremes in provincial education systems can be seen on Canada's two coasts, in British Columbia and Newfoundland. Newfoundland's unique system represents a partnership between denominational education boards and the province. *Denominational Councils* representing three major faith groups are created by the same legislation which provides for the Department of Education. Three types of boards exist: 21 *Integrated* boards represent the Anglican, United Church, Salvation Army and Presbyterian churches; 12 *Roman Catholic* boards; and one *Pentecostal Assembly* board. The *Seventh Day Adventist* church also operates one school board which, although not supported by a denominational council, operates and is supported in the same manner as the other boards.

Boards receive funding according to a formula and do not apply through a budget to the Department of Education. They must provide financial statements to the Department. In 1988-89, about 92 per cent of expenditures were provided by the province, while 6 per cent came from a mixture of poll (per-person) taxes on wage earners and property taxes on commercial property. The mechanism for raising property taxes is unique in Canada. A School Tax Authority, distinct from the local municipal authority, has the right to levy individual and commercial property taxes. Certain groups are exempt; low-income wage earners, those over 65 years of age, and those on social assistance. All capital funding is provided by the province, which allocates funds to the Denominational Councils which in turn decide what capital projects to support.

Teachers' salaries are paid directly by the province, using a single salary grid. Collective bargaining is handled by a committee representing the government, the teachers, and the Federation of School Boards. The pupil-educator ratio is set by the Minister of Education. This provides a measure of equalization among poorer and richer districts. The remaining 25 per cent of total funding flows through the 35 school boards. Some provisions are made for small and remote schools, particularly in Labrador, to offset increased per-pupil costs in these areas. Private schools, of which there are only two in Newfoundland, receive no provincial funding.

Nova Scotia

Nova Scotia's 22 school boards have no direct powers of taxation, but may annually request their municipalities to grant them additional local tax revenue. Approximately 5 per cent of total revenues come from this discretionary municipal taxation, and a further 3 per cent from school-board revenues from interest, fees, and miscellaneous charges. The remaining 92 per cent comes from provincially mandated funding sources, including provincially set property taxes which provide about 15 per cent of total school-board receipts.

Funding to boards is provided by way of a weighted per-pupil formula, which attaches higher levels of support to higher grades and to industrial and business education. The per-pupil amount to which the weights are applied are set annually by the province. Weighting factors are also provided for small school divisions and for special education grants. All transportation costs for eligible pupils are paid from provincial sources.

A two-tiered system of collective bargaining exists, with most salary items bargained provincially, while local terms and conditions of employment and some benefits are determined locally.

Prince Edward Island

In Prince Edward Island, 100 per cent of approved education expenditures are supported by the general revenues of the province. While authority exists for the five regional school boards to seek ministerial and ratepayer permission to levy property taxes, none has ever done so. Boards are sharply constrained in spending power, being able to spend only to approved levels. Should a deficit occur, its cost will be deducted as a first charge against grants in the second year after the deficit is incurred.

Collective bargaining takes place through a committee composed of representatives of the Department of Education, the Treasury Board, School Trustees, School Units (Boards), the Teachers' Federation, and teachers. The Minister of Education specifies the pupil-educator ratio, and it is not subject to bargaining.

Because of the relatively small size and geographic uniformity of the island, there is little need for weighting related to distance or sparsity.

New Brunswick

New Brunswick, like Prince Edward Island, supplies its 42 local school districts with 100 per cent of approved expenditures from general provincial revenues. Perhaps not surprisingly, very limited use of the power in the Education Act to hold referenda in order to levy local property taxes has been made by the boards. Only two such requests have been made, both for music programs, and both were approved. Funding is provided by a combination of weighted pupil grants and line-by-line operating grants. Boards provide budgets to the province, and after examination and approval, these budgets become part of the provincial estimates process and are published in the expenditure estimates of government. There is very close monitoring of local board spending, through monthly reports and on-site visits. Surpluses can be retained for local use, and deficits must be retired within three years from future funding.

All collective bargaining is done provincially.

New Brunswick has long been the only province in Canada not to offer a kindergarten program. The province intends to begin offering this service in 1991-92.

While property is taxed for education purposes, the funds from the levy flow into the general revenues of the province. There is a tax credit for low-income owner-occupiers' property of $8,000 of assessed value. Assessment is at "full and true market value."

Neither the Maritime provinces nor Newfoundland offer any direct funding to independent or private schools.

Quebec

Divisions scolaires/school boards in Quebec are still legally defined along religious lines, with Catholic boards as the dominant group, and Protestant boards as the minority (dissentient) group. Of Quebec's 217 school boards, 138 boards provide French as the first language of instruction: 15 boards provide English as the first language of instruction; and 64 boards provide programs in both languages. Provincial funding provides about 92 per cent of the total expenditures of divisions. Property taxes provide about 5 per cent or $258 million of the total revenue (1988-89), with adult education fees and miscellaneous revenues accounting for the small remaining balance. School boards may levy property taxes above a provincially mandated ceiling, but only with the ratepayer's permission. Such taxes have rarely been requested by the boards.

Until 1986-87, significant property tax credits were provided. Since that time, changes to the calculation base have made these credits much less significant. The relatively small remaining credits are used chiefly to offset property taxes on farmers. However, these credits are not specifically directed at the relief of school taxes.

Quebec has had historically the highest per-pupil expenditure level in Canada. More recently, expenditure levels in Quebec have grown more slowly, and the ratio of pupils to teachers has grown slightly. School-board expenditure control is maintained through government scrutiny of the monthly level of bank borrowing by boards. Such borrowing requires government approval.

All monetary items are bargained provincially, while local issues of assignment and division of labour are negotiated between the employing board and its teachers.

Quebec provides substantial support to private schools. Two categories of schools exist, "recognized as supportable by grants," which receive about 46 per cent of grants to public schools of the same level, and "declared to be of public interest," which receive about 66 per cent of funding to similar public schools. Private schools for children with disabilities may, under regulation, receive up to 100 per cent of equivalent public schools for such children. About 9 per cent or 99,000 of Quebec's 1.1 million students attend independent or private schools.

Ontario

Ontario's 176 school boards directly raise about 53 per cent of their total expenditures largely from local property taxation, while receiving the remaining 46 per cent from provincial sources; the lowest level of provincial support to school boards of any province. Ontario's system is based upon public (secular) and Roman Catholic boards of education, both of which are publicly funded to provide programs from kindergarten to the completion of Ontario Academic Credits (formerly Grade 13). Provincial support for Roman Catholic high schools was extended in 1987. One small protestant school board exists in Ontario and is funded to provide programs to the Grade 8 level.

Recent government initiatives have increased Ontario's already high per-pupil expenditures to the same level as those of Quebec, which have been historically the highest in Canada. Government action to lower the class size to 20 pupils in Grades 1 and 2 has been primarily responsible for the increased expenditures.

Ontario's funding system is based upon providing equal revenues per pupil, per mill of tax effort. However, because of the greater revenue capacity of boards with strong tax bases, Ontario has set approved expenditure limits on per-pupil spending, weighted for a number of factors related to remoteness, and fixed provincial support at the lesser of actual local per-pupil expenditures or these provincially set levels. On this basis, Ontario contributed 58 per cent of "recognized" expenditures in 1988. It is clear from the difference between this figure and the overall contribution of 46 per cent that many boards provide significant program levels in excess of provincial standards. In other words, there is great diversity in per-pupil expenditures and program availability in Ontario. Because virtually all boards are at or above the provincial expenditure limits, Ontario now has, *de facto*, a foundation-grant plan.

All collective bargaining is at the local level.

Ontario provides no support to private schools. Perhaps ironically, Ontario's independent school system is among the strongest in Canada and has the greatest proportion of elite schools.

Manitoba

Manitoba's 53 school divisions and districts receive about 53 per cent of their support from provincial general revenue and a further 20 per cent from provincially levied property taxes. School divisions/districts levy a further "special" tax on real property, which raises about 24 per cent of total revenue. In terms of gross revenue, Manitoba is third, after Ontario and Saskatchewan,

in its degree of dependence on the property tax base. However, an extensive system of property tax credits exists in Manitoba, providing over $200 million to a wide range of eligible groups. This system sharply reduces the effective net rate of dependence of education on property taxes. All renters and owners receive a basic credit, with additional income tested credits for low-income persons and seniors. Farm property (land and buildings) is exempt from the provincial property levy, but farm residences are subject to normal residential property taxation.

Manitoba has among the most complex of provincial education finance systems. Until 1988-89, the system used a percentage equalization approach, but without an expenditure cap. This meant that divisions with strong fiscal capacity were able to raise and spend more per pupil, and at the same time, to receive equalization grants to ensure that, per mill of tax effort, they received the same per-pupil revenue as did the division with the highest assessment per pupil. This lack of fiscal control has recently been replaced with a system not unlike that used in Ontario, where the overall allowable expenditure growth is capped at some provincially set level. Divisional expenditures above this level, while permitted, are not supported provincially. Some observers believe that the lack of fiscal control and direction from the province has led to Manitoba having the lowest pupil-educator ratio in Canada. Manitoba has 13 categorical grants for a wide variety of special needs and regional adjustments, as well as weighting factors used in determining the basic block grant levels.

All collective bargaining is at the local level.

Manitoba extends support to independent schools, which in this case include Roman Catholic and other denominational, as well as traditional "private" schools. The province has agreed to gradually extend funding until levels reach 80 per cent of the average per-pupil support given to public schools to qualifying independent schools. The present level is about 55 per cent. This will make Manitoba's independent schools the most generously supported by any province in Canada. Approximately 5 per cent of Manitoba's pupils attend independent schools at present. This level has grown slowly in recent years.

Frontier School Division serves communities, largely in northern Manitoba, where there are no traditional school divisions. This division also provides schooling for a number of treaty Indian students from reserves and adjacent communities under agreement with band councils and local communities. With over 5,000 students, the division is larger than many southern divisions and receives additional special support from the province in recognition of the costs of education in remote areas.

Saskatchewan

Saskatchewan's 115 school divisions receive about 50 per cent of their funding support from provincial general revenue. The bulk of the remainder comes from a provincially determined levy on all real property. To this funding level, which in theory represents the cost of meeting provincial program standards, local "special" levies may be added to augment programs, at the discretion of local boards. No taxpayer permission is required for such "special" levies. Because Saskatchewan has no property tax credits, its effective rate of dependence on property taxes is second only to Ontario's.

Funding support in Saskatchewan is provided at different rates for what are called "divisions," which correspond to age groupings. A different rate is also set for "major urban," as opposed to other divisions. Kindergarten and Divisions I and II are Grades K-6, Division III is Grades 7-9, and Division IV is Grades 10-12. A wide range of weighting factors is used to adjust for sparsity of population and small schools. The "Northern Lights" school division provides services in northern areas in a similar fashion to Frontier Division in Manitoba.

Capital funding support is based upon a local contribution of an average of 10 per cent of the project cost, with provincial support through grants and debenture support providing the remaining 90 per cent of the cost.

Saskatchewan uses a system of provincial bargaining of salaries and benefits with local bargaining of educational and sabbatical leaves and other local issues.

Independent high schools in Saskatchewan which have been in operation five years or more and which meet provincial standards of curriculum and teacher qualification are eligible for per-pupil grants of about two thirds of the support for provincial high schools. Elementary independent schools receive no provincial support.

Alberta

Alberta provides 65 per cent of the funding of its 144 local school boards through provincial grants comprised of about 90 per cent general revenue and 10 per cent from municipally collected levies on nonresidential property. Local divisions levy taxes on both residential and nonresidential property for a further 30 per cent of total revenue, while fees and miscellaneous income provide the additional 5 per cent.

Alberta provides over 80 per cent of its provincial grants as unconditional transfers, with less than 20 per cent in the form of categorical grants for such services as transportation. All capital funding comes from the province.

Only senior citizens receive property tax credit which is the lesser of $1,000 or property taxes and is applied on all property taxes payable. At 40 per cent, Alberta's total dependence on property taxes is fairly high, in common with all provinces from Ontario westward to British Columbia.

Collective bargaining is done entirely at the local level.

Qualifying independent schools receive an average of 72 per cent of the provincial support levels for all students from Grades 1 to 12. Independent schools serving early childhood (Kindergarten) receive 100 per cent of the provincial support rate.

British Columbia

The financing of public education in British Columbia's 75 school districts has been marked with controversy for a number of years. In the early 1980s, the government was faced with a serious decline in revenues and opted, among other measures, to reduce the funding available to public education and, at the same time, to increase the fairness in distribution of the available funds.

The mechanism which they chose to develop was a partial Resource Cost Model of education finance. A key component of this system was the *fiscal framework*, which enables the province to ascertain the cost of a standard level of education services anywhere in the province. The province initially took away the local board's ability to access the local property tax base, in effect imposing a form of 100 per cent funding, in which one component was revenue from local taxes. More recently, the capacity to tax locally was restored (1986-87), but then effectively was limited once again in 1990, when the requirement for a referendum on excess local spending was introduced.

Taxpayer equity is addressed in British Columbia through the use of a home-owner grant against property taxes payable for education purposes. In 1988, this grant was $380, while average taxes for education purposes, including the local levies, were $517. Thus average actual education taxes were $137 per taxable residential property.

British Columbia has gone to great lengths to ensure the integrity of the fiscal framework used to determine costs of the provincial service standards in each school division. However, as is always the case in a democracy, political considerations have sometimes required substantial deviation from the

principles of a Resource Cost Model. The fourth section of this paper will examine this issue in more detail.

With the changes announced in 1990, British Columbia has moved into line with the provinces from Quebec eastward, in which the province effectively sets the ceiling on expenditures within which local boards have very little room to manoeuvre. Whether or not this policy framework will survive in the longer run, as it has in the eastern provinces, remains to be seen.

Indian and Northern Affairs Canada

Indian and Northern Affairs Canada (INAC) supports education services at the band-and-tribal-council level through use of a formula which is based initially on a pupil-educator ratio of 19:1. The formula is adjusted by a variety of factors related to remoteness, band size, and climate. However, many categories of expenditures are not covered by this formula, which is currently under examination. Many bands and tribal councils are seeking additional funding support, and the right to directly administer all funds which are designated by Parliament for Indian education, without the intermediate role now exercised by INAC.

A wide variety of special arrangements exists covering Treaty Indian education. In northern Quebec, an autonomous school division controls and directs education services for the Cree bands covered under the James Bay Agreement. In most provinces, a majority of bands now direct their own education programs through a variety of mechanisms ranging from separate incorporated authorities to education committees under band council direction, while a minority still receive education programs directly administered by INAC officials. In British Columbia, the province, by agreement with Indian and Northern Affairs Canada, administers education funding to Indian bands.

In most communities where Indian bands have assumed direct local control of education, outcomes have improved, sometimes dramatically. While a direct causal relationship cannot be proven, experienced observers have noted significant improvements in retention rates, increased access to postsecondary education, and increases in the aboriginal teaching force which accompanied the development of local control. Thus there can be little doubt that education for Treaty Indian children, and the concomitant development of aboriginal educational leadership, must rank among the highest priorities for the next decade. In particular, the full transfer of responsibility for education, along with expanded resources, is a key strategy which should be vigorously pursued by the Indian and federal governments. In spite of the major improvements noted above, overall retention rates are still less than 30 per cent in many cases. Life in aboriginal communities remains characterized by

extraordinarily high rates of social breakdown, making the human and economic costs of continuing poor quality education enormous.

Northwest Territories

Over the past five years, the Northwest Territories have moved to develop a system of regional boards of education to complement the existing boards in Yellowknife. Recently, the Northwest Territories have sought to develop a suitable funding system to further strengthen local control and accountability. At the present time, there are 11 boards, while one region retains territorial administration for the delivery of education programs, and one territorial high school in Yellowknife serves students from both the Yellowknife public school and regional boards.

There are nine officially recognized languages in the Northwest Territories, and many children now attend primary school in their aboriginal language, learning English as a second language. It is somewhat surprising that in spite of the distances involved and the costs of northern living, expenditures per pupil are not significantly greater than education costs in the northern areas of the provinces.

Outside the city of Yellowknife, virtually 100 per cent of education support comes from the general revenues of the Territories. While there is a small territorial property levy outside Yellowknife for education purposes, it raises less than 2 per cent of total education expenditures. In Yellowknife, education finance is similar to that found in the Prairie provinces, with a dependence of about 30 per cent on local property taxation.

All teachers, except for those in Yellowknife Districts 1 and 2, are staff of the territorial civil service, and bargaining is between the government and the teachers' association. The divisions in Yellowknife have local bargaining of all issues.

There are no independent schools in the Northwest Territories.

Yukon Territories

All Yukon schools are under the direct administration of the Department of Education. While the Education Act provides for the development of boards of education, none have been established to date. About 90 per cent of the funding of education comes from general revenues, with 5 per cent from territorially levied property taxes. The remainder comes from fees and revenues from the federal government.

Teachers are civil servants, with all bargaining done with the Yukon government.

There are no independent schools in the Yukon.

Summary

It is clear that provinces and territories in Canada have evolved very different mechanisms for the funding and administration of public and private schools. It is unfortunate that this pattern has not given rise to more careful study of the impacts of these differences on the effectiveness of what goes on in the classrooms of the nation. The final two sections of this report will examine this dilemma of the lack of connections between funding, school administration, and student outcomes.

The British Columbia Experience

Prior to 1982, British Columbia had a relatively simple education finance system, the Basic Educational Program (BEP). In this system, the province imposed a ratio of 20 students per "instructional unit." The cost of each unit was determined to be the total operating expenditures of all districts in the previous year, divided by the total number of instructional units in that year. Each year's new BEP was then calculated by multiplying the value of the instructional unit by the units to which each division was entitled using the 30th of September enrollment. Services over and above the established provincial standards were funded entirely through local taxes. This system, while simple, resulted in very rapid escalation in local property taxes. When the recession of 1981 occurred, sharply reducing government revenues, the government decided to impose significant restraint on education funding.

Essentially, the system chosen for this task was a Resource Cost Model (RCM), patterned on the work done in Illinois by Chambers and Parrish [1982]. The actual fiscal framework required to make the system functional was introduced in 1984, after a two-year period during which the government imposed strict expenditure management controls, and in fact took over several school boards which had failed to comply with government fiscal directives. Since 1984, the overall system has been modified to take more cost factors into account, but in essence remains a resource cost approach to education finance. Before reviewing British Columbia's actual experience with the RCM, the conceptual aspects of the RCM approach to education finance should be examined.

A Resource Cost Model of Education Finance

The Resource Cost Model (RCM) is a particular form of program funding. The RCM assumes that there are approved curricula and required levels of teaching time assigned to each approved curriculum or program. Like its counterpart, the Program Planning Budgeting System (PPBS), the RCM first establishes the programs and levels of service which a system wishes to support, and then ascertains the costs of those programs and standards of service in every area in which they are delivered. Thus there are two key elements in such a program. First, the standard or level of service which is to be supported must be explicit and clear. Second, the funding must be tied to the *actual* expenditures required to provide that level of service in each division. The RCM requires an explicit link between the program and the cost of delivering that program. As such, it can be used to promote clarity in a budgeting system and accountability in the program. The process of setting standards can be as detailed as necessary. However, excessive detail at the margins (how much chalk will be allowed for each classroom?), will not likely result in much improvement in the allocation of funding.

As an example of the issues in cost variation to which an RCM approach must react, consider the matter of teacher experience and resulting salary differentials. It is widely accepted that teacher experience, after an initial period, is not a strong predictor of student achievement. Nevertheless, experience does result in higher pay in most systems. Hence the RCM must respond to the higher costs of salaries in divisions with more experienced teachers, without suggesting that such funding will result in better student outcomes.

There are three basic components to an RCM funding system. The *Fiscal Framework* establishes the costs of all aspects of service delivery in each school board or division. It uses actual costs insofar as possible, including expenditures in regard to salaries, material supplies, utilities, and transportation.

The second element of the RCM determines *Service Levels*; the levels at which the province will support services, including pupil-educator ratios, support staff ratios, classroom supplies levels and so forth. These ratios are then used in conjunction with the fiscal framework to establish local supportable budget expenditure support in each school division.

Finally, the province must determine its overall *Levels of Support* to education. Support could be set at 100 per cent, or at any lesser level, depending upon the role of local revenues. For example, the province may set 80 per cent as its level of support, with local taxation expected to provide the final 20 per cent. The province then provides 80 per cent of the costs of delivering the mandated service levels and services as determined for that division by the fiscal framework. The three elements must be strongly supported by

management information and accounting systems which use standard definitions and procedures across the province or jurisdiction.

If local revenues are to be used in supporting the provincially mandated program, then it is likely that some form of equalization will be required to ensure that tax effort is not required to be greater in a poorer area than a wealthier one to support basic programs.

Provinces may decide that local divisions may or may not have the right to levy additional local taxes to support programs in excess of the mandated level. If they are given that right, ceilings may or may not be imposed to restrain wealthy areas from providing levels of service that are greatly in excess of those determined to be adequate across the province. Clearly this is a decision which also affects local autonomy.

Maintaining Horizontal Equity

The difficulty of achieving horizontal equity with traditional education finance systems is well known, and in fact has been the subject of a number of civil suits in the United States. A Resource Cost Model is based upon the notion that the requirement for horizontal equity is a given; the standard of service should be the same in each division, and the model recognizes that it is unlikely that the actual cost of providing it will be the same in any two divisions. Differences in staff salary scales and student enrollment levels, school size, geography, and population dispersal will require differing expenditure levels to provide similar services. Proponents of the RCM argue that the traditional education finance systems' weighting and factoring approaches to regional and local cost variations are likely to be both excessively complex as well as ineffective.

Hence a key element in the RCM is the "fiscal framework," which is an accurate record of the actual salary, materials, operating and transportation, and other costs in each division or region. From these actual costs, unit costs are derived and used to calculate the support levels to be provided by the province. Thus the RCM is driven by actual costs wherever possible.

If the fiscal framework supporting the RCM is carefully created and then equally carefully maintained, such a system can provide very good levels of horizontal equity.

Achieving Vertical Equity

Among the most variable of all education costs are those related to the provision of special needs services. For many remote divisions, the costs associated

with such services mean that access is simply prohibitively expensive. For smaller divisions, the costs of meeting the educational needs of one moderately disabled child can translate into local taxation levels of one mill or more.

An RCM approach allows for the determination of the actual costs of providing such services locally, and then ensures that the mandated levels of such services are indeed supported through the budget process. Thus insofar as the province mandates levels of service, the RCM is a very equitable mechanism for ensuring vertical equity.

Local Autonomy

Local autonomy in the administration of public education can be defended on a number of grounds. In summarizing the history of the importance of local education administration, Stephen Lawton [1987] writes: "Underlying all of these reasons (for local autonomy) is the simple belief that the local community – not the province or the nation – is the central unit in society outside of the family and that control of education ought to remain at that level."

Lawton goes on to cite the economic principle of "subsidiarity" as a further ground for local education administration. Subsidiarity suggests that there is a natural geographic area which can be effectively and efficiently served by any given service. Since the recipients of education services must be gathered into locations to receive that service, then some aggregation of these local units makes economic sense as a unit of service delivery.

Local autonomy may be expressed along a number of dimensions, including, but certainly not limited to, those affected by the choice of an education finance system.

For example, is the board itself elected from the community it serves, or not? In Nova Scotia, some school trustees are appointed by the local municipal council, while others are elected. Presumably, these boards are less autonomous than a board from, say, Saskatchewan, in which all members are elected as trustees.

Does the local board have an autonomous revenue-raising capacity? In New Brunswick and Prince Edward Island, trustees effectively have no capacity to levy taxes. In Nova Scotia, Quebec, and now British Columbia, they may do so with either municipal agreement or local taxpayer referenda. In other provinces, locally raised revenue forms a major component of education funding. However, having such a capacity does not necessarily confer much real autonomy in decision making. The overall funding levels may be such that,

in spite of having the right to levy taxes, effectively all local tax room is consumed in providing statutory programs.

Can local trustees make actual program choices and modify curricula to meet local needs? Can a variety of nontraditional staff be used to deliver programs that are seen to be needed in local communities? For example, in the Northwest Territories, first instruction is often in an aboriginal language. Few nonaboriginal people speak these languages; few aboriginal people are "certified" teachers. Are local trustees able to resolve these dilemmas in regard to language instruction? In many southern divisions, work preparation and transition programs may best be staffed by people who are actually in the work world. Can such people actually be retained as "teachers"?

Even the question of fiscal autonomy itself has a number of dimensions. Can boards raise money locally? Are local funds over and above funding required for regular programs? Must provincially determined programs be delivered in exactly the same manner in every division? Hence fiscal autonomy involves policy decisions which go beyond the characteristics of the funding system.

How can the Resource Cost Model support the concept of local autonomy?

The RCM treats most grants to divisions as "block" grants. That is, the revenue received by the division is in recognition of the standard costs of delivering provincially mandated education services in that division, the nature of the student population and of the division's geography. If the trustees and administrators of a given division wish to provide a unique mix of services to better meet local needs, the provincial education act makes them free to do so. The bulk of the funding then might best be termed a "variable block grant."

For example, if a division wished to make class sizes slightly larger than the funding system supports, in order to free resources for special programs, it could do so, with no penalty. Because maintenance costs are usually based upon recent averages, adjusted for inflation, programs which make operations more efficient can provide real savings in the years in which they are instituted. These savings can then be used to provide other programs or to reduce overall costs. It may appear that because the fiscal framework is adjusted annually to take into account changes in overall cost levels, there is little local incentive to become more efficient. However, when there is a local taxation role, such longer-term savings are also passed on to local taxpayers, in proportion to their overall contribution.

When an RCM is combined with the right to raise local taxes for local programs, then divisions retain additional, substantial fiscal autonomy.

However, because such programs are a 100-per-cent charge on the local tax base, local taxpayer accountability is also enhanced, and in poorer regions may function to prevent much initiative on the part of trustees for additional programs.

Meeting the Needs of Smaller Communities

Small schools and small school divisions face additional costs related to their operational scale. While it may be argued that in many regions of Canada, school *divisions* are simply too small to provide the required range of education programs desired, the fact remains that student populations are so widely dispersed that *small schools* will be required, no matter how large a division might become. A resource-cost approach seeks to quantify the actual costs of delivering the agreed-upon standards of service in each division. Inherently, it responds to actual costs, and therefore can provide a very sensitive mechanism for adjusting funding to the costs of small scale operations. Divisions requiring many small schools will receive sufficient resources to enable delivery of the provincial program in each school. It should be noted that British Columbia does specify that the small school must be necessary; it is not acceptable to receive special funding for a small urban school only a mile or so away from a school which could accommodate the pupils.

Controlling Costs with the RCM

Because the Resource Cost Model is tied to actual costs of defined service standards, it is not an open-ended funding system. If service standards are not raised, then only inflationary costs will present themselves in the system. New services can be added, but only by explicit agreement and funding provision. The standards would become well known to the education community and to parents, who would then be able to dialogue with their division in regard to the services which are actually being provided at the local level. Should divisions wish to deliver a different mix of services, they could do so, but would have to make it clear why this was a desirable local policy.

New service standards can be established at any time. For example, should there be consensus that services are required in the areas of libraries and guidance, standards can be set, costs determined, and the required funding provided. It is noteworthy that with this approach, all divisions are enabled (though not required) to access the new standard at the same time. Divisions are not required to provide the total first-year costs of new services, because funding is tied to the actual, *present* costs of the service levels.

The resource-cost approach to funding is inherently stable because it is based upon funding a stated percentage of the costs of explicit standards of

service. Of course, as with all services, there are inflationary costs which occur. Nevertheless, at a provincial level, these costs can be estimated with a reasonable degree of accuracy, and fiscal planning can proceed accordingly. Should a new service level be deemed advisable, costs can be estimated and a decision made on the implementation process for the new standard. Naturally, complete accuracy is not possible, but the degree of cost control available in the RCM system is significantly greater than in other, less well-defined funding systems.

Cautionary Notes

Because the standard setting agency is the province, the RCM can be a powerful tool of horizontal and vertical equity, ensuring that the same level of service is funded in every part of the province. By establishing a service level for each major education program component, an RCM focuses future funding debate on program issues, rather than on fiscal support. If an RCM fiscal framework is created and maintained with all costs truly reflected in it, then the annual increases in cost should relate only to changes in enrollment and in the cost increases or decreases related to inflation. The quantity of service per pupil which the system is supporting remains constant.

There are some pitfalls to such an approach, however. First, the standards which are set must be adequate, and have broad consensus, or else the system will not enjoy support, because it will be perceived to be based upon an inadequate level of support. Second, as with any formula, annual adjustments must carefully be made in line with actual costs. While the province retains the overall funding responsibility, it must keep the funding framework intact. If it cannot afford to maintain its percentage of the costs of the established service standards, it must either reduce its percentage share, or reduce the standards. If the framework itself loses its integrity, then the resource cost model essentially ceases to exist. Therefore the funding debate always must keep the issue of education standards separate from the costs of the standards. Finally, as is the case with any funding system in a democratic society, the political process is vital to the possibility of innovation and adaptation to new opportunities.

The British Columbia Experience

British Columbia introduced a form of resource cost funding in 1983-84. Because the RCM was introduced in the context of provincial financial restraint, there was, unfortunately, little consultation with the education community in developing the fiscal framework or service levels. Some education services were not initially included in the system and were added later. In

order to impose fiscal restraint, divisions were ordered not to exceed certain spending levels. While for most rural divisions, this did not pose problems, the target levels required significant reductions in staff and program in some urban areas. The refusal of some boards to meet the targets led to the government dismissal of trustees and the appointment of official trustees in a few boards.

Hence, in assessing the actual impacts of the changes, it is difficult, if not impossible, to separate the effects of restraint, the techniques of its imposition, and the new education finance tool, the RCM. It does appear that many of the criticisms of the British Columbia RCM, which are commonly heard in educational circles in Canada, are actually criticisms of the political choices made by the government of British Columbia in implementing education finance reform.

Any funding model could have been used for their purpose, and the merits of the government's fiscal policies has nothing intrinsically to do with the Resource Cost Model. Nevertheless, in using the RCM over the past six years, British Columbia has illustrated some of the successes as well as the pitfalls which can undermine the utility of the model.

The RCM and Collective Bargaining in British Columbia

A key element in the RCM fiscal framework is the salary costs of teachers. Salary costs must be adjusted annually for negotiated changes, incremental costs, and COLA adjustments. If this is done, the salary component of the fiscal framework will maintain its integrity. The likelihood is that, over time, there would be strong pressure for provincial bargaining of salaries and benefits.

In 1985, British Columbia announced that it would recognize salary increases of only 5 per cent in that year in its fiscal framework. However, the actual contract agreements provided for increases greater than 5 per cent. As a result, the fiscal framework changed from a tool for costing education services into an element in the collective-bargaining process. The framework no longer accurately reflected the costs of the service levels, and hence lost some of its utility.

The RCM and Cost Control

In theory, an RCM could be designed that met everyone's goals for an adequate education system. Whatever the expenditures might be initially (and they would likely be fairly high), after the initial shock, the pattern of increase would be very stable, related to enrollment and changes in prices.

On the other hand, should a jurisdiction wish to reduce expenditures, it is easy to design a Resource Cost Model to do this. The simplest mechanism would be to establish a fairly high pupil-educator ratio (PER), and then to determine most other costs as a function of this ratio. In other words, no formula, *of itself*, can determine an adequate level of funding, nor the maintenance of that funding level over time. Formulae can be inherently fair or unfair, but cannot determine an adequate level of resources. That decision is, and will remain, a political matter.

British Columbia, for a variety of educational and financial reasons, decided, as a matter of policy, that the pupil-educator ratio should be raised somewhat from its level in 1981-82 of 16.6:1. In setting the service level for teaching staff, this decision was embodied into the fiscal framework, resulting in an increase in the PER to 17.4 in 1987. This 5-per-cent reduction represents 1,237 teachers (1989 data) and $46 million. The actual total savings is higher, because a number of other service levels are dependent upon the number of teachers in the system.

However, the RCM is a particularly fair model from a distributional perspective. Hence, if funds for education are seen to be limited, as is increasingly the case in the public sector, a Resource Cost Model is a useful and equitable tool for distribution. In British Columbia's case, the impact of the RCM, even in the years of overall reduction in education finance, resulted in increased provincial funding for many rural areas, thus indicating the inequitable distribution of resources in previous education finance systems.

School Finance in the 1990s – British Columbia's Response to the Royal Commission

After regaining the right to levy local taxes and to set local expenditure levels in 1986-87, school boards continued to increase local spending, in spite of the government's wish to restrain overall increases in education expenditures. Two factors likely contributed to this trend. In the first place, the home-owner grant (tax credit) is sufficiently large in many areas to offset, or even reduce to zero, net education property taxes. Hence, in many communities, there was perceived to be tax room for local education spending. Second, there was a "hangover" of public demand dating from the reductions of 1984-85 which caused trustees to make expenditure decisions, using the above-noted tax room.

In 1988, the Royal Commission on Education tabled its report, *Legacy for Learners*. Many of the report's 83 recommendations concerned education finance. By January 1989, the government responded to the report, with significant new funding to implement reforms such as full-day kindergartens and an increased capital school-building and replacement program.

An equally important part of the response was to affirm the continued use of the RCM approach to education finance, and to put in place the requirement for local referenda on any proposal by boards to provide programs over and above those supported in the provincial service level mandate. In effect, the province has moved to fund 100 per cent of the approved program costs in every region. The fact that some of these funds will come from local tax effort is irrelevant, in that the new program assumes that local boards will and must make this effort to achieve revenues for the mandated programs. The truly *local levy* is now to be reserved for program spending above the provincial minimum, subject to local approval via a referendum.

By taking this action, British Columbia has indicated its intention to put the RCM concept fully to the test. If indeed its service levels are adequate and the fiscal framework comprehensive, then funding to support mandated programs will be available throughout the province, and annual expenditure requirements will grow with enrollment and wage and material costs. However, local autonomy has now been seriously challenged with strong fiscal control. The rich commercial property tax base cannot be accessed by local school boards, and mandated program levels cannot be exceeded without a referendum. New services cannot be started without service levels being established by the province. To quote Stephen Lawton [1987], writing about trends in the exercise of provincial powers in education:

> . . . funding is being tied increasingly to program, with provincial grants tied to the costs of specific programs. Although, as in British Columbia's case, there is no direct admonition that the total sum a school board receives based on program funding be allocated in this way, there is strong normative pressure for school boards to do so.
>
> . . . equality is valued more highly than autonomy, even though it means funds are not spent in a manner that assures the greatest satisfaction for the greatest number.

Summary

British Columbia has moved farther than any other province to establish a rational fiscal framework which equitably distributes the available education funds throughout its jurisdiction. It has an elaborate system of costing and accounting which appears to track costs accurately across its widely varying regions. The province has also invested heavily in the development of outcome indicators and is now committed to an indicator-based student records and tracking system.

There is at least the prospect that future debates in British Columbia will increasingly take shape around what the system is trying to achieve with its

students, rather than whether the funding for instructional costs is accurate. There will be no shortage of controversy surrounding these developments; nevertheless, the reforms to date are substantial, concrete, and respond directly to many of the criticisms voiced by education observers. Careful observation and study of their effect would be in the best interests of all Canadian educators.

Public Sector Reform, Private Schools, and Vouchers

This section will examine a variety of possible approaches to strengthen Canada's elementary and secondary education system. Approaches to be considered include gathering and using better information about what now happens in our schools; better use of what we know about instructional, classroom and school management; alternative governance mechanisms to improve accountability and parental involvement; and the potential impact of vouchers. The section will conclude with a synthesis of elements which together could significantly strengthen our overall system.

Critics of the public-school system generally fall into two broad categories. The first group are concerned with claims that the skill levels of graduates are falling, and/or are inadequate to meet the needs of employers, or of centres for higher education. Such criticisms were the focus of the *Southam News* report on literacy and are frequently heard from deans of various faculties of Canada's universities. The empirical basis for such criticism is weak, given the fact that adequate comparative historical data are not available, and that a much larger proportion of high-school graduates are seeking higher education in 1990 as compared to, say, 1950. At the present time, over 50 per cent of high-school graduates proceed directly to some form of higher education, whereas in 1950, only about 15 per cent of graduates did so. Hence postsecondary centres experience a far broader range of student abilities than was the case in 1950.

The other major body of criticism comes from parents who perceive that their values in educational matters are not adequately addressed and/or supported in their public school. Concerns may be focused on questions of curriculum, "values" (religious or secular), learning style, or ability to meet the special needs of disadvantaged children.

Proposed solutions frequently include major reform of the public system, or calls to expand parental and student choice, perhaps through state funding of private schools or, in more radical proposals, through vouchers for schooling. Before addressing the available and feasible options for reform, we must ask the nature of the current monitoring and measurement techniques in the public system and the nature of the reforms which are being considered. In

other words, how do we know whether reform is indicated, and how can we be assured that the proposed reforms might be effective and appropriate?

Monitoring the System – Lots of Data, Little Information

It is remarkable that a system which by 1990-91 annually expends upward of $30 billion has so little information concerning its effectiveness or its impacts upon its students. Consider the fact that no province has a reliable indication of its drop-out rate, let alone of the composite reasons for students dropping out. Of course, there have been many studies of the problem and much data accumulated which is fairly consistent across time and jurisdictions. The fact remains that school divisions in the main do not monitor drop-out rates and do not provide any clear management direction to set targets to reduce this rate. Yet it is very well known that student retention is very closely related to later attachment to the work force and hence to future economic achievement. Data on student achievement are rarely used for assessing the effectiveness of teachers, even within carefully controlled circumstances. In fact, some jurisdictions have agreements that data on test results will not be disclosed at the individual school level.

Little routine data collection takes place for the purposes of system management, staff development, or quality control, apart from that gathered at the classroom level for creation of individual student records. It is even more rare to find school division objectives set in regard to issues such as retention rate, attendance rate, completion rate, or achievement on standardized, or division level tests.

Defenders of the present system argue that education is such a complex matter that it defies quantitative measures, and that, because students arrive at school with vastly different home situations, experiences, and readiness, it is unfair to compare the education outcomes achieved by teachers and schools. They also argue that the outcomes of education should be far broader than specific skill in literacy, numeracy, and citizenship, and that these broader outcomes cannot be readily measured. These defences are absolutely true; they are also largely irrelevant.

The health-care system does not avoid collecting data on patient morbidity and mortality just because some patients arrive sicker, poorer, or older than others. The mortality and morbidity rates for various risk categories from surgical procedures are in fact very carefully monitored, and frequently result in recommendations to individual doctors to vary their technique or to engage in professional development. The tradition of "grand rounds," in which issues of care and treatment are carefully examined provides professional development lead by acknowledged experts. And anyone who works in the health-

care system knows that data about care and treatment outcomes are collected in considerable detail and are the subject of much research.

In the private sector, it is common to adjust expectations of staff to the realities of their local market; to provide specific goals, training, and support to those who serve specialized markets of all sorts. While such activities sometimes do happen in the public education system, they are usually based at the local school level, and highly dependent upon the leadership of the principal, rather than being embedded in the system at the divisional or provincial level.

Put another way, it appears that the school system has said that because it cannot measure *all* of the relevant indicators of student attainment, which is true, it should not systematically measure *any* indicators. Because of the admitted and real difficulty in using provincial final exams, some schools make it possible for students to graduate, often with apparently high standing, having never written any examinations at all. Higher education is often a rude awakening for such students.

Some studies, such as the Radwanski report in Ontario [1987], have observed that the system often uses streaming to divert whole subgroups into less-demanding program streams. The widely held prejudices concerning such students then become self-fulfilling prophecies; the students do drop out, and at alarming rates. Few attend centres of higher education. Such streaming is not based upon carefully used testing procedures or upon reliable data concerning ability. Nevertheless, it is done and it frequently places children upon an educational road of no return that they and the nation can ill afford.

We might ask the question regarding student achievement another way. What are the observable qualities of an effective citizen? Most would suggest the ability to read and perhaps write critically, to be able to understand and use the ordinary mathematics of personal and public finance, and to have some notion of our nation's history, geography, and its political and economic systems. These should be combined with interpersonal skills of communication, of building and sustaining relationships, of tolerance and appreciation of difference. The capacity for self-discipline in regard to work and a commitment to contribute to society should be coupled with health-giving personal lifestyles, and skills and knowledge for the formation and nurturing of families.

The fact is that virtually all of these outcomes can be assessed, many quite rigorously, others less so. There are educational interventions and techniques which are known to affect all of them. Sometimes they work, and sometimes they don't, but the techniques are known.

The assessment of student progress along the continuum of desired skill levels has three purposes:

- giving individual feedback on progress to students and their parents;

- providing management data to enable local or system-wide professional development and training; and

- providing data for research and development of new approaches to instruction which may strengthen the system.

Therefore, one of the first central reforms of public education would be a commitment to obtain, collect, and systematically use a range of data regarding student achievement.

The Pursuit of Educational Excellence

There is a rich and growing literature regarding the reform of the current public education system in many parts of the world. For example, a number of American jurisdictions use magnet schools (schools with a particular mandate to serve a group or provide a particular form of education). These schools have an open enrollment and may or may not have extra resources with which to deliver their program. They may have a board drawn from parents of students, which is actively involved in running the school, selecting the staff, and making educational decisions. The district board approves the magnet school budget, by-laws, and policies.

Some areas are considering the establishment of a parallel school authority for the education of disadvantaged groups. For example, the State of Minnesota is debating whether or not to establish an Indian Education Authority within the Twin City Metropolitan area, as an alternative to assist in the education of American Indians in the urban area. Such a district would have trustees elected from the target population, as well as its own budget. Canadians are already familiar with parallel school districts, in the form of Catholic, or other denominational boards of education, established under constitutional guarantees to provide religious education. However, it appears that Canadian society is now prepared at least to consider education as a collective right, in which groups, such as the aboriginal people, who are in some sense culturally, linguistically, or racially distinct, may request the right to educate their children in schools which are separate from the dominant school system. Such districts will usually be smaller than their counterparts in the dominant system, thus providing new challenges to education program delivery, as curricula continue to expand and change rapidly.

A very strong movement for "excellence" has developed over the past 10 years in both the United States and Canada. Careful research is slowly revealing those management, pedagogical, and fiscal approaches which are

closely connected with gains in education achievement, as measured using standardized tests. While such studies are time consuming, and methodologically difficult, several streams of research have produced varying results, all interesting, but not yet conclusive.

In perhaps the most useful survey of the field to date, Hanushek [1989] reviewed 187 studies of expenditure-related variables in terms of educational outcomes. He concludes that three costly variables, teacher qualifications, experience, and class size have little discernable relationship to student performance. However, it is important to note that in the case of teacher experience, the large majority (80 per cent) of studies do show *some* significant positive correlation with student attainment. It is likely that this is not an endless effect; that is, 30 years of experience is not necessarily any better than 15. However, *some* level of teacher experience is almost certainly beneficial in terms of student outcomes.

One hundred and four of the studies used the individual students as the unit of analysis, while the remainder used schools or larger entities as the unit of analysis. Because the student level data were usually aggregated, it is difficult to tell whether the results are a product of overall similar student results, or of a wide range of results, *averaging* to small differences. That is, it is possible that smaller classes benefit some students and actually are worse for others; the studies do not allow for clarification of this critical issue. This point has been made in other ways by some educators. They would agree that, for example, student performance in small classes is not likely to change unless the teaching methods used change significantly to take advantage of the smaller class. After all, a lecture, is a lecture, is a lecture. Whether the audience is large or small makes little difference.

Two promising avenues of continuing research are cited by Anderson [1989]; re-analysis of the meaning of effect sizes, and re-focusing on productive teaching strategies and on productive schools.

Citing Rosenthal, Anderson suggests that many of the apparently small effects of, for example, class-size changes noted by Hanushek actually result in major gains for some students. More careful examination of the changes in relation to individual student performance may show the need for greater differentiation of instructional approaches for differing student needs.

Productive teaching practices are reviewed by Hanushek [1989]. While the differences are hard to quantify, it does appear that principals can detect the significant pedagogical skills present in "good" teachers. If this is the case, the way may be open for greater use of the expertise of "leader-teachers" in increasing instructional effectiveness.

Identifying effective schools, as measured by student attainment on standardized tests, has been the focus of a large number of recent studies. Variables which have been identified include strong pedagogical leadership from the principal, high expectations of students held by teachers, an emphasis on basic skills, time spent on specific tasks of learning, an orderly school and classroom environment, and the systematic evaluation of students. Unfortunately, these are characteristics which are difficult to develop and to maintain, given the mobility of students and staff, and which are difficult to teach to principals.

Viewed from outside the education setting, these outcomes would be seen as the product of good management. Unfortunately, the education system spends relatively little time training its managers in such skills. Furthermore, data from the field of organization behaviour suggest that while some of these skills can be learned to some degree, this is by no means an easy process, and its outcome cannot be guaranteed.

At the very least, there is strong agreement that leadership in education means pedagogical, as opposed to administrative leadership. School systems which attempt to ensure that their superintendents and principals spend more "time on (pedagogical) tasks," will be acting consistently with this finding.

Summary – What Do We Actually Know about School Reform?

Unfortunately, much of what we know is essentially negative. We know that much data, but little useful information concerning student outcomes exists, and what does exist is not widely used for system management or improvement purposes. We know that, at least in aggregate, smaller pupil-educator ratios do not appear to be related to better student outcomes. Again, in aggregate, we know that higher teacher qualifications (more than one degree) are not closely related to student attainment. We know less about the effect of teacher experience. On a more positive note, we are beginning to discover the characteristics of effective schools and school divisions. In broad terms, they are the same characteristics which mark effective leadership and administration in many settings, coupled with highly skilled pedagogical leadership at divisional and local school levels.

To counter this pessimism, we should note also that the public-school system is accommodating students with a wider range of needs than ever before. Society has demanded that a broader range of issues be addressed, including life skills, cultural programs, and new academic subjects. Most larger systems now have fairly wide choices of programs at the high-school level; indeed some criticism of the breadth of these choices can be found. Many urban schools provide international baccalaureate programs or advanced placement programs.

School systems serving Canada's aboriginal people are undergoing rapid evolution, as local bands and tribal councils take responsibility for administering their local schools. Across Canada, pressure is mounting to develop regional or provincial Indian educational administrative and leadership structures to replace the remaining functions of Indian and Northern Affairs Canada. Native teacher training programs exist in many provinces and supply an increasing percentage of the staff for native schools.

It is interesting to note that many northern schools, and all Northwest Territories schools, have a high degree of local control, a concept which has been advanced in the United States, but not applied very widely either in the United States or Canada. Locally elected boards or committees, working with the principal, select staff, set local educational priorities and decide to some extent on resource allocation. Southern jurisdictions might do well to experiment with such approaches to encourage meaningful parental involvement in local schools. This is particularly important if, as research suggests, parental support for and involvement with the education of their children is a strong predictor of educational outcomes.

Systems now spend as much as 10 per cent of their budgets on programs for children with special learning needs. In a review of the costs and benefits of special education in Newfoundland, Jay Godsell [1989] cites various studies which show that for mildly retarded individuals, the cost benefit ratio of discounted future earnings always exceeds the cost of education, usually by over 5:1. Such expenditures cannot be expected to have improved the performance of nonhandicapped students, but will have been included in many of the studies which examine outcomes in relation to overall expenditure levels.

According to the Statistics Canada definition of poverty, over 17 per cent of Canada's children live in conditions of poverty. We know that they arrive at school with several strikes against them, and that school alone cannot remedy these deficits. Educational gains for such children will be more closely related to the alleviation of their poverty than anything else. Schools have taken on some social roles which were formerly held by families or other social structures such as churches. The expenditures associated with these activities cannot be readily ascertained; nevertheless they appear substantial and cannot be expected to result in increased *overall* student achievement.

It may well be that we have moved down the curve of diminishing returns from investments in the traditional mechanisms for education system improvement of increased teacher training and reduced class size. At the same time, there is abundant evidence that the system is not meeting the needs of the approximately 30 per cent who drop out before completing high school, nor of aboriginal Canadians, nor of many inner-city children. Answers will not likely come either from general increases in resources, nor in reduction of

effort in overall terms, but from carefully considered strategies combining school and school-division innovation, pedagogical management, research and evaluation, and greatly improved information systems.

Evolution as Reform

The massive size of the public-school system makes it difficult to discern the very major changes which have been occurring over the past 20 years, partially in response to criticisms such as those noted above, and partially as a response to the changing external political, constitutional, scientific, and social environment. Without pretending to make an exhaustive list, major changes have occurred in the following areas:

– the development of computer education, both as a subject in itself and as a tool in relation to traditional subjects;

– rapid and widespread development of second language education programs, using separate or separated facilities. The two official languages of Canada are now provided in most provinces as first languages of instruction, and immersion programs in French and English, as well as German, Ukrainian, and other languages exist. In the aboriginal communities of Canada, English or French is frequently a second language of instruction; the early years using the local language of the people;

– development of a wide range of new subjects, particularly, though by no means exclusively, at the high-school level. Larger high schools now frequently provide courses in political science, world issues, sociology, economics, environmental studies, while business courses have also expanded to include accounting, graphic design, entrepreneurial skills, and other related courses. More frequently, these developments take place in concert with local or national industries and business groups;

– acceptance of the school's role in providing education in human sexuality, and in the associated risks, including AIDS education;

– acceptance, though in many cases with reservations, of the expanded socialization/support role of the school, involving the use of social workers, counsellors, and support staff to enable students, teachers and parents to address serious issues of abuse, suicide, drug and alcohol abuse, family breakdown, and other stresses;

– development of a range of courses for special needs students, ranging from the inclusion of severely and multiple-handicapped students to wide-ranging gifted education programs. It is not uncommon for schools to use up to 10 per cent of total expenditures on such programs;

– development in many urban and some rural areas of special schools within the overall public system. Such schools include "Native Survival Schools" and arrangements with parent groups from particular minority groups to become directly involved in the administration of a school to better respond to the needs of their children. Other examples include schools for drop-outs, re-entry programs for adult learners, and schools for other subgroups, such as those providing education for teenage mothers and child care for their children; and

– greatly increased use of travel and exchange programs for a variety of purposes, including language and cultural experience, sports, performing arts tours, history and geography, world issues, and political studies.

No doubt readers could add further examples to this list. The point is simply that the public-school system, in spite of its scale and reputation for rigidity, has in fact evolved significantly in the face of many challenges and opportunities. Some of these changes have required only internal adaptation; others, such as those related to the development of minority language education programs, have required whole new school systems to be established, articulated, funded, and governed.

In some ways, these responses from the education system have become the focus of new criticisms. Concerns are voiced about fragmentation of the curriculum and about the lack of time for "core" subjects such as language, arts, and mathematics, given the competing demands for optional subjects. The role of schools in minority language education has involved the education community in Canada's national angst concerning the rights of groups representing both official languages. Supporters of increased inclusion of special needs students are faced by opponents who view such inclusion as detracting from the educational experience of their children. In a free society, increased diversity in the programs of core institutions will frequently result in public controversy, as those formerly on the margins of society begin to make the demands that society now tells them are legitimate. In this situation, new skills of management, including conflict management, are required. Such skills are not always found in abundance in any system!

Nevertheless, this evolutionary pattern itself holds considerable promise for meaningful education reform. Futurists and writers in the field of organization behaviour note a strong trend towards what Toffler, Naisbitt [1987], and others have called the "loose-tight" structure. In such structures, overall standards and supports come from the larger system, while decision making and local structures are determined by those directly involved at the local level. The best examples from the world of education administration come from divisions such as those of the Northwest Territories, Frontier School Division in Manitoba, and Northern Lights School Division in Saskatchewan.

Such divisions have produced excellent curricular materials which reflect local cultural values and history, thus enabling children to learn using materials that affirm their experience. In each of these divisions, mechanisms for local school management, involving parent committees in hiring, curriculum development, and local policy are blended with regional boards of trustees providing overall system governance. These boards are usually elected from among those on local school committees, thus ensuring regional representation. While there are some examples of such governance mechanisms in urban school divisions, they generally resulted from years of pressure and are not in any sense systemic alternatives to traditional education governance models.

Given that we know that parental involvement in education is one of the good predictors of a child's educational success, these models would seem to offer great potential for adaptation to urban situations where drop-out rates remain high, and where parents are often alienated from the education system by reason of class, ethnicity, language, or other factors.

Private (Independent) Schools – Vehicles for Education Reform?

There is considerable confusion in regard to the meaning of the terms "private" and "independent" schools. In Alberta, Saskatchewan, Ontario, and Quebec, which provide constitutionally supported public funding for schools serving either the Catholic or Protestant minorities, such schools are termed "separate," or "dissentient." In these four provinces and in Newfoundland, where there are four denominational boards, such divisions are governed by elected boards. Enrollment requirements vary widely among these boards, with some being required to have open admission, while others may limit admission on various grounds.

In provinces such as British Columbia and Manitoba, Roman Catholic schools are "independent," because these provinces do not provide public funding for Roman Catholic schools, nor are the boards of such schools publicly elected by their supporters. Instead, such schools receive grants and function as "independent" schools, and can select their students. In practice however, most such schools usually welcome a very broad range of students, if they have room to accommodate them.

In most provinces, there are also schools operating outside the public or dissentient system, which usually prefer to be known as "independent" schools, rather than the more elitist "private" school. In general, they have freedom to teach religious and other subjects not found in the public curriculum and, usually, to regulate their admission of students. Independent or private secular and religious schools exist in all provinces and are subject to varying levels of support and regulation. British Columbia, Alberta, Saskatchewan, Manitoba,

and Quebec provide grants to such schools which may reach as high as 80 per cent of that province's per-pupil support of its publicly governed system. In Ontario, where there is no assistance to private schools, their teachers do not require certification. In other provinces, the requirement for certification may or may not be contingent on whether the school receives public funding support.

In addition to the formal arrangements for denominational, Protestant or Catholic, secular (public), and independent education systems, there are a wide number of examples of local arrangements which respect historic practices or serve distinct minority groups, though sometimes without the full protection of statutes. *De facto*, there have been Francophone school boards in Manitoba for many years, though in law, these are "public" boards. As provided for in education acts, Hutterian schools exist in the Prairie provinces, and Mennonite schools are found in Ontario, though these schools are without constitutional guarantees. In a number of cases, usually for historic reasons, religious orders have been enabled to operate a specific school within a larger school system.

This brief summary makes it clear that the support and regulation of independent schools varies widely across the country. In Ontario, where no support is offered, 3.6 per cent of students were enrolled in such schools in 1986-87; in Saskatchewan, where significant support is provided, only 1.5 per cent were so enrolled. Generally speaking, however, enrollment reflects the presence or absence of public support. In the Maritime provinces and Newfoundland, enrollment averages less than 1 per cent. In British Columbia, where qualifying independent schools are now entitled to up to 50 per cent of the local per-pupil provincial support, enrollment has grown with public funding from 3.9 to 7.1 per cent over the past 20 years. In Quebec, with the highest current level of support, enrollment reached 8.6 per cent in 1986-87. In 1988, 4.7 per cent of Canadian students were enrolled in independent schools, up from 2.5 per cent in 1971.

It is not evident whether funding has followed public demand, but does not actually affect enrollment, or whether it has led public demand, increasing enrollment. There is also little data on the overall effect of public support on tuition levels. We do not know whether increases in public funding have led to reductions in tuition or to lower rates of tuition increases. We do not know if the increases in funding have served to move teachers' salaries in the private system closer to those of the public-sector counterparts.

We also know that there is no evidence that reduced numbers of students supported by provincial grants have actually saved the taxpayer any money. While provincial grants usually decrease with loss of enrollment, local boards may replace this decreased funding base with locally raised revenues. Boards

often argue that enrollment decreases are often too small to result in actual savings. The only situation in which such savings could be ascertained with any certainty is where all revenues are taken into account, and careful assessment is made of the unit costs of providing education to the remaining students.

There is little (and mostly American) evidence that private-school graduates have higher skill levels than average, after corrections for socio-economic factors are made. In regard to such schools, Levin [1987] notes that while initial studies found some comparative scholastic advantage for students of independent schools,

> Adjustment for some of these (methodological) problems considerably reduced or eliminated estimated private-school advantages. Longitudinal results based on sophomore-to-senior changes found even smaller estimated private-school effects. Depending upon the statistical model, the maximum private-school advantage varied from nothing to about .1 standard deviations.

Citing the work of Alexander and Pallas in regard to student achievement in Catholic high schools in the United States, Levin [1987] notes that private school students would at best score 2 percentile points higher than public school students, indicating that 48 per cent would score lower, and 52 per cent higher. This is surely weak evidence of any academic superiority of independent schools.

While a policy of supporting independent schools may be justified as expanding choice for parents, there is little or no Canadian evidence, and weak to negative American evidence, that such a policy can be supported on either academic or economic grounds. Theorists may advance strong claims in this regard, but thus far, in spite of some studies, their assertions have not been substantiated.

Hence it would seem that independent schools per se do not offer a strong alternative for reform of the overall system of elementary and secondary education in Canada today. This is especially so given the fact that, by nature, independent schools are not subject to public policy direction, whether it be for purposes of reform or not. In any case, there is little empirical evidence on which to base policies in developing funding support for private schools.

Vouchers and Education

No country in the world currently uses a voucher system for public education. Apart from methodologically flawed and quite negative studies done in Alum Rock, California in the 1970s, where private-sector corporations were contracted to provide instruction, there have been no field studies or trials using any of the possible voucher models in North America. Thus the

exploration of this option has most frequently been through academic study. The modern voucher proposal, as put forward initially and in very broad terms by Milton Friedman in 1955, suggested that parents have access to a voucher at the average per-pupil tax cost of public education. Vouchers could then be used to purchase education services at any certified institution.

This early concept has been criticized on a number of grounds, including the fact that individual students have significantly different needs, and that private schools will not willingly expend extra resources on those requiring them above the voucher level. Others have argued that vouchers assume the desire and capacity of parents to make informed choices. This may be the case for some; it is not likely the case for disadvantaged inner city people, or members of minority groups. Areen and Jencks [1983] argue that: "an unregulated voucher system could be the most serious setback for the education of disadvantaged children in the history of the United States."

Finally, critics suggest that over time, the better pupils from supportive homes will be "creamed" into elite schools, leaving the less able, less supported students in an impoverished public system. The state systems of Britain and Australia are sometimes cited as examples of this consequence.

Alternatives to the original proposal have been put forward to counter some of the criticisms. These include vouchers which are tenable only in public schools, limiting tuition charges to the value of the voucher (in effect, 100 per cent state supported costs of education, but in private or public facilities), and vouchers available only for private schools (scarcely different from per-pupil grants now available). Jencks [1970] suggested different voucher systems which could accomplish quite distinct and diverse goals, and developed a typology of seven models as follows:

- *unregulated market model* (vouchers of the same value for every child);

- *unregulated compensatory model* (poor get larger vouchers);

- *compulsory private scholarship model* (unlimited tuition fee structure, but poor students must be accommodated by scholarships paid by schools);

- *effort voucher* (school expenditures can vary, but as expenditures go up, so does direct extra cost to parents, but in a manner related to the parental income);

- *egalitarian model* (value of voucher identical for all schools, and no school is permitted to charge extra);

- *achievement model* (value of voucher is related to student achievement level as measured on standardized tests); and

– *regulated compensatory model* (schools may not charge extra tuition, but may earn extra income by accepting children from poor families or other disadvantaged groups).

Thus, Lindelow [1980] stated that: "Vouchers lend themselves to . . . free interpretation. They can be developed along many different lines to express many different social, economic, or political aims."

Within Canada, there appears at present to be no serious discussion of vouchers as a major reform strategy at the elementary-secondary level, and certainly there is no informed debate among the several alternatives identified in outline form by Jencks.

In determining whether or not vouchers might, in practical terms, improve the quality of education, we need to be clear about the economic nature of the debate. From an economic perspective, education provides a mix of private and public goods. Private goods are those which accrue to the individual, while public goods accrue to the wider society. For example, the ability to earn a better living is, primarily, a private good, while the capacity to engage in "good citizenship behaviour" is a public good. While very few economists such as West [1965] argue that the public good is simply the sum of all the private goods, such positions are extreme. Furthermore, it is clear that even the narrowest private-school education carries with it at least some minimal public-good production, and the most egalitarian public system produces significant private benefits for its graduates.

Henry Levin [1987] has more usefully recast this issue as the question of the capacity of private and public schools alike to increase the quality of their output of private and public goods. Levin examines the capacity of the private system to respond to the need for the production of the public goods required of our education system. He notes that the recent foundation for the voucher system is in the work of Milton Friedman [1962], who wrote that: "A stable and democratic society is impossible without a minimum degree of literacy and knowledge on the part of most citizens, and without widespread acceptance of some common set of values."

Thus Friedman called for: ". . . certain minimum standards, such as the inclusion of minimum common content in their programs."

It is interesting to note that supporters of independent schools in provinces which have extended substantial funding aid to such schools have expressed great concern over regulatory extension. Partly for this reason, the Ontario Federation of Independent Schools does not seek provincial financial support, and expressions of concern have been voiced in both Manitoba and British Columbia, where provincial regulation is being extended to the independent school sector along with increased provincial funding.

Levin [1987] notes that the process of ensuring educational and administrative standards would require major government regulatory intervention, which would likely be resisted. At the same time, he asserts that the exclusivity inherent in virtually all private schools means that many of the public goods required of our school system could not be produced easily. For example, inclusion of students of differing social, economic, religious, cultural, and linguistic backgrounds is deemed by some commentators as unlikely in a voucher-supported education system. Parents are much more likely to choose schools which reflect their personal value choices and their socio-economic background.

This is an important criticism of private education, especially if one views the education system as the earliest and primary integrating force in society. However, in Canadian public policy, and to a lesser extent in American policy, the rights of minority groups and of women have been the subject of many laws and much public concern. Perhaps today then, the education system does not need to bear the entire burden as society's "integrator," and can afford a greater role as transmitter of what may be broadly understood as the cultural heritage and interests of minority groups.

At the same time, Levin notes that conditions in public schools, perhaps by virtue of the wide demands placed upon them for inclusion, have furthered calls for private schooling. In addressing this dilemma Levin [1987] states: "At the heart of improving educational policy must be a consideration of how to expand the output of private goods while maintaining public goods, or increasing them, for any given resource commitment."

This would appear to be the fundamental policy issue to which vouchers are but one possible answer.

Practical Considerations

Because of the largely theoretical nature of the literature on vouchers, few proponents have addressed the administrative and service delivery implications of voucher-driven systems. A cursory review of some of these issues illustrates some of the problems which would have to be addressed.

Needs or Means Tests — Virtually all of the more recent American voucher proposals contain some element which relates voucher size to parental ability to pay. The administrative implications of this are obviously very significant, requiring state regulation of voucher size through assessment of income (needs test) and/or assets (means test). This might be done using income tax data, but would obviously require massive disclosure on the part of all families of what is usually understood to be private information.

Given Canada's present rate of separation and divorce, the notion of having to get absent, but legally responsible, spouses to disclose income information which would then result in their being assessed some level of tuition fees is a daunting administrative prospect.

Transportation — While many American education systems are used to bussing children, even at the elementary levels for long distances, the majority of Canadian children attend elementary school within walking distance of their homes, unless they live in rural areas. Assuming that the average size of schools remains reasonably constant, it would seem inevitable that voucher schools would, of necessity, add significant transportation costs to any system. It is not unusual for such costs now to exceed 5 per cent of budgets in urban divisions, where the majority of students do not require transportation. Hence it would not be unreasonable to expect voucher systems to require an additional, non-program cost increment of at least 5 per cent for additional transportation.

School Buildings — At the present time, school-building capacity is at least initially related to the local population existing at the time of construction. In other words, capacity is related to geographically distributed population. In a voucher system, distribution would most likely not be primarily driven by location, though of course, location would be one factor to consider. Hence we might expect significant difficulties in efficiently using the existing education plants in a voucher system, and could anticipate relocating specific schools as their popularity waxed and waned over time.

Neighbourhood Schools — Most Canadian families support the notion of a local school which acts not only as the education locus, but is in an important sense part of the social fabric of the community. Real estate agents report that one of the key questions in selling a family home is, "Where is the school?" Friendship networks, after-school play, and recreation programs interact with local schools. A policy decision to move to a voucher system at the elementary level would seriously alter this basic social structure.

Rural Reality — An inevitable implication of a successful voucher program is an increase in the choice of options for the consumer. That is, after all, the point of vouchers; the dissatisfied consumer can take the voucher elsewhere. However, the average size of rural schools in Canada is already under 200 pupils, and often such schools have K-12 or K-9 enrollments, implying an average of 20 or fewer pupils per grade. Most educators are already concerned about the educational program of such small schools, particularly in the sciences and in the later grades. A system which promoted the development of even smaller schools catering to parental and student tastes would cause serious concern, as well as sharply higher staffing requirements in rural areas. Unless the voucher system also depressed professional salaries or increased

the numbers of pupils per teacher, per-pupil costs in rural areas, which are already high, would grow even further.

To date, the potential of vouchers to achieve some structural changes in the education system remains entirely theoretical. There are so many possible options for voucher systems, and such a range of practical issues which require resolution that it would not be unfair to characterize vouchers as a solution in search of a problem. Quite simply, a wide range of options for achieving program variety, accountability, increased parental and student choices, and expenditure management are already available. All have been tested under field conditions and evaluated using a variety of methodologies. Those who continue to support voucher plans in the absence of either clear definition of the proposed plan and at least some data would appear to be supporting an ideological application of market principles, rather than well-grounded education reform.

Increasing Choice and Responsiveness – Some Alternative Mechanisms

While voucher proponents most frequently promote them as the best means to provide greater consumer choice and hence to exert discipline on the education market, there are a mix of other policy alternatives to consider, which are rooted largely in alternative governance models. As noted above, on the basis of evidence to date, Levin [1987] is sceptical about the effectiveness of relying on vouchers. Therefore, he proposes six examples of reforms which could be accomplished within the public sector, at minimal or no cost. These are: open enrollment schools, school site governance by parents and teachers, schools of choice (sometimes called magnet or specialty schools), allowing high-school students to take courses at postsecondary colleges for credit (advanced placement courses, or vocational courses), and mini-vouchers, (vouchers for students with special needs or who wish to pursue specialty subjects). His final suggestion is that private contractors might be approached to provide very specific types of training at a lower cost than the schools themselves. For example, it could be cheaper to teach computer skills using the installed capacity of the private sector than to develop whole labs and teaching staff for each school in a division. However, this would likely only be the case in selected urban areas and at the secondary level. More detail concerning some of the options suggested by Levin can be found earlier in this section.

In concluding this brief examination of vouchers, it is interesting to note that most of the writings cited are in the American tradition of a rigid separation of church and state. In Canada, such a separation does not exist. Five provinces fund approved independent schools, in some cases to the level of

80 per cent of the funding of public schools. Quebec has made this level of funding available now for over five years.

In practical terms, the willingness to provide per-capita funding to independent schools is little different from a voucher of a similar value; the family chooses the school, and the state reimburses that school for the enrollment of the student. However, even in Quebec, where independent school funding is at the highest level in Canada, independent school enrollment remains below 10 per cent of total enrollment. In neighbouring Ontario, where no support is provided to the independent sector, enrollment is 3.7 per cent, while in Saskatchewan, where significant support is provided, enrollment is only 1 per cent. In effect, the Quebec model comes very close to what Jencks called "private scholarship model" where a voucher of equal value is provided, and schools offer scholarships to students from poor families. Whether any of the theoretical benefits of vouchers have been realized in Quebec is unknown. In any case, the role of independent schools and the degree to which their support constitutes a form of voucher funding presents an interesting opportunity for careful study.

A Focus for Reform – Priority Alternatives

Knowing What Is Happening

Consistent with the findings of this paper, it would seem appropriate to strongly support the Council of Ministers of Education (CMEC) and Statistics Canada in their efforts to collect and disseminate meaningful data, particularly student outcome data concerning elementary and secondary education in Canada. In conjunction with this activity, the Council and the Canadian Teachers' Federation and its provincial affiliates might well collaborate on the development of a joint approach to learning assessment which recognizes the need for sound and publicly available data to guide individual and collective teacher development, school and school-division development, and student decision making.

In order to make this possible, provinces will have to support the installation of computer-based student records programs in all schools. In at least some cases, provinces will also have to provide assistance to school divisions to make effective use of the resulting data to strengthen instruction and retention at all levels.

Funding Systems Which Are Linked to Programs

In order that consumers, educators, and funders can know what is being funded in our schools, funding systems need to be developed and adopted

which make such linkages explicit. These may or may not be variants of the Resource Cost Models explored in this paper, but in some visible and fundamental manner, the funding of education should be linked to the expected activities within the system being funded.

A Focus on Effective Pedagogy

A great deal is already known concerning effective teaching and learning strategies, much of which confounds our traditional classroom-based, age-specific "I teach and you learn" approach to education. This is clearly a matter of national interest. Thus, the federal government, through the appropriate granting councils and university faculties of education, might establish as an ongoing research priority the study and dissemination of effective educational interventions, particularly at the classroom and school level, which can be associated clearly with gains in student retention and student outcomes.

As noted elsewhere in this paper, there is a close connection between parental involvement in and support for their children's education, and their children's eventual educational attainment. Therefore, another urgent research priority might be to examine alternative governance models, such as those already in use in remote regions and some inner-city areas which build stronger mechanisms for parent involvement in system-wide and local school policy and governance.

As a third research priority, the federal and provincial governments, perhaps acting through the offices of the CMEC, should support a thorough study of the academic and other outcomes of students in independent schools in comparison to those in public schools, carefully noting different per-pupil expenditure levels, results corrected for socio-economic and other differences.

This research would be useful in better informing the ongoing debate concerning the effectiveness of private schools in comparison to their public counterparts, as well as in making the difficult public policy choice of where to invest scarce education resources.

Anti-Poverty Measures as Education Reform

Commentators and governments at all levels have taken note of the close connection between family poverty and poor educational attainment. Hence the design of improved anti-poverty programs, including such related measures as child care and direct parental involvement in school governance, particularly for families with preschool and elementary school-aged children can be expected to have a significant impact upon education outcomes in the medium and longer term.

The most persistently impoverished group in Canada is aboriginal people. In this regard, it would appear vital that immediate action be taken to devolve the full responsibility and adequate funding for education of Treaty Indian children to aboriginal governments, as well as to press for economic development which leads, in particular, to better employment possibilities for aboriginal Canadians.

Summary

There are many possible initiatives for education reform within the existing public education system. A great deal is already known about what works best in classrooms, and how children can be more effectively engaged in the learning process; more such knowledge is accumulating quickly. We now know fairly clearly what constitutes effective educational leadership. And we know that many of these measures are not particularly costly to implement.

At the same time, available evidence, both in theory and from the one actual field (and badly flawed) experiment cannot justify the development of a voucher system. There is no Canadian evidence, nor significant American evidence that learning is superior in independent or private schools, once socio-economic differences among pupils are taken into account. Radical changes in funding education are not required to elicit and support greater parental involvement or choice, better tracking of students and their achievement levels, the use of more effective learning strategies, or even cost control. What is required is the political will to place these issues squarely on the public agenda and careful research to ascertain which are worthy of adoption.

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